

Sipping Science with a Science café

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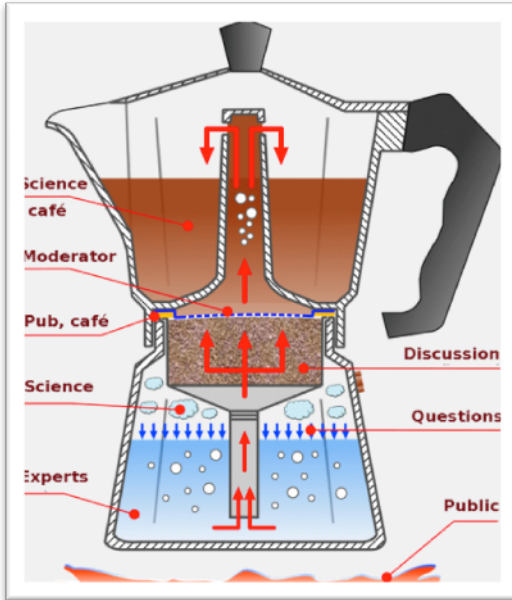
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What is Science Cafè

Introduction

Welcome. Relax, take a coffee or a beer. The discussion will start in a moment, but don't be too impatient. We are here to explore, discover and enjoy science and technology.



I am the moderator of this science café. Here are our experts, and you, the public. This is a public -driven discussion, so I'll just let the expert to present them-selves and I'll pass you the microphone. The most important ingredients of this coffee are... your questions.

This is how a science café works. It is a conference in Alice's wonderland, i.e.,

upside down. Instead of listening EXPERTS that sit behind a desk, we ask experts that sit, like us, at a table and discuss with them. Science café aims at bringing science back into the society.

We think that scientific discussion is fundamental in our society. Science and technology are more and more important, and people are often asked to choose among technical options, not an easy task. Broadcasting media like TV and journals or magazines do no clarify every doubt, and Internet is still missing a human flavour. Why not spending one in a time an evening in a friendly environment, discussing about space missions instead of football?

Once, Alfréd Reni said that a mathematician is a machine for

turning coffee into theorems. But we want to speak of a different type of coffee, although we still are sometimes dealing with math. Imagine yourself into a pub or a café, drinking a beer or a tea. You are relaxed and almost happy. You may ask yourself: what am I missing now? Science! Of course.

A science café is a discussion about some topic in science and technology as scientists do. This does not mean drawing formulas on napkins, but discussing with experts all on the same ground, where you, and not the experts, are at home. A bit like Watson and Crick, when they discovered the secret of life (the structure of DNA) while drinking beer at The Eagle pub (actually they also spent some time in the lab, but this is another story).

Science, technology and innovation play an increasing role in our lives. At an increasing rapid pace we are faced with major changes with regard to our habits, work, leisure, health and food, just to speak of some themes.

As citizens, we are also asked to assess technical decisions, such as transport policy, energy choices, laws affecting health, research, and in general the choices that affect us and our sons. These decisions also involve a degree of scientific consciousness. Consciousness, not just knowledge, because one cannot limit the political and cultural choices to a single technical assessment, or, on the other hand, an emotional evaluation.

The purpose of the science café is that of demythologizing science communication, removing it from the cathedra and bringing it into everyday life. Very often, we think of the scientific community as a one-way flow of information, from experts to ordinary people who simply have to absorb some concept. It is true that many of the technical knowledge necessary to make an informed decision is not everyone's heritage, and to understand that we often need to have specific skills, but it is also true that the scientific method requires the discussion on equal level, without exceptions. Thus, the concept of science café has more to do with participation than simply science.

The method of science café is very simple: we meet ourselves in a nice, relaxing place with some expert, and, cheered by a coffee (aha!), a tea (in UK?), a glass of beer (much more common!) or a

fruit juice (maybe in Cancun.), we chat (well, discuss) on the day's topic.

A science café is not a conference, experts introduce themselves and the theme of the discussion, but this part is limited to a minimum. The engine of the meeting are always the questions, actions and discussions of the public, muffled-animated by a moderator.

The idea of science cafés arose a few decades ago in UK and in France, and has nowadays spread into the entire world. As simple as it may seem, this recipe has many variations, according with the type, age and cultural context of the public, geographic area and location.

A single event can be organized with little effort, but to give continuity to an initiative several people have to join. And since science has not the best reputation for what concerns amusement and popular participation, the willing organizers may profit of the past experience of other colleagues.

Promoting change

'Science and Society' is a universal description of this area of activity, but there are many sciences and many different societies. The relationship between the sciences and the public is now becoming as complex as the relationship between the public and the Arts. Just as the Arts incorporate theatres, cinemas, exhibitions, galleries, festivals and performance, now the Sciences are displayed in Science centres, festivals, science weeks, outreach activities and modern technologies. Furthermore the targeted audiences include young children, family groups, teenagers, hard-to-teach adults, deprived communities, immigrants and retired people. Just as the Arts involve poetry, music, theatre, painting, sculpture, etc., Science Communication now involves debates, quizzes, demonstrations, popular songs and games, as well as Twittering, Facebook and YouTube.

But if we are moving out of the traditional academic structures how do we relate them to SciCafes? While it is important to keep the Cafes independent, experience shows that it is often easy to build a bridge between formal institutions and informal

Cafes. For instance Science Centres often provide a suitable venue because they have a café in the building. They also provide publicity for any events in their building.

Universities often have courses on science communication, in which graduates are being taught to interact with the public. SciCafes can provide practical experience of this and so these courses often provide assistance to find speakers on different topics.

Universities frequently have outreach programmes to the community, and the people who organise these events are often interested in starting SciCafes because it is part of their strategy and also provides them with direct experience.

Science Societies are concerned with their public image, which often determines their funding, so that they are often keen to be seen to promote public dialogue and engagement.

Many government departments are interested in science education, training teachers, etc. Often they have funds for specific public projects like adult learning, animal experimentation, synthetic biology etc.,

Many cultural and artistic groups are now including science in their agendas, since human sciences are questioning the traditional views of art, philosophy, literature, etc. So Arts centres are often keen to adopt SciCafes.

As for schools cafes, it is clear that science education is in crisis almost everywhere in the world, so that new ideas are widely acceptable. Approaching teachers, individual schools and education authorities is a fairly easy way to start Cafes in schools – although it is more difficult to keep them free from the hierarchy within the school.

So in many ways the Cafes can build bridges between the old world (traditional universities, teaching methods, remote experts) and the new world (informality, engagement, internet). A key element of SciCafes is that they are very flexible – they can be used for education, controversy, training, comedy, medical information, ecological engagement, ethical arguments, historical analysis or the latest research.

SciCafes are also flexible enough to incorporate social and technological change. One interesting parallel is with modern American Christian churches. Around twenty years ago many groups decided that the real church was not a building – it was the audience. They recognised that the formal nature of the

church service,- the priests, old hymns, creeds and prayers, - were not attracting a modern audience, so they moved out of the old buildings into theatres, warehouses, schools, etc., and the services have become more informal and ecumenical. SciCafes don't need to repudiate traditional scientific institutions, but they are a product of social change and moving in the same direction as the modern world.

Science and Cultures

SciCafes engage the sciences with local cultures. Whereas the sciences are pretty much the same the whole world over, cultures are enormously varied, and this is why Cafes can take so many different forms. There is no universal formula for a SciCafe evening, and each Café has to engage with local behaviours, manners, beliefs, and ways of thinking.

In Japan some Cafes allow members of the audience to text questions and comments via their mobile phones to a screen. Why – because in some areas respect for older people is critical to a conversation, so that when the oldest person in the room has voiced an opinion it is rude to directly contradict it. However an impersonal, texted, opinion or question is accepted as a way of moving the discussion on.

In France, with many different types of Café and centuries of egalitarian discussion, a number of main speakers represent differing approaches to a scientific subject, so that science is not seen as a single view. But the speakers only get two minutes to explain their position – so that the audience join in very quickly. In Uganda, Cafes in the local language take place in 'Malwa Joints', where the local 'malwa' brew is made in a very large pot and the people stand round it drinking through large straws. These started because someone approached the local elders and suggested that discussions about local issues were failing and that they should be restarted in the traditional mode – around a 'malwa' pot. The elders agreed and now local issues are HIV, malaria, water purification, etc.

But many cultures have no alcohol. In Mumbai, India, the Cafe is 'Chai and Why?' (Tea and Why?), In Isfahan, Iran, coffee is the

only drink, as in other Muslim Cafes.

So the SciCafes must reflect local cultures, and often that is a considerable challenge. Historically, European Cafes have taken place in middle class areas, with an intelligent and informed audience. The Cafes have proved popular because the topics chosen have related to the personal, social, global experience and anxieties of this (large) section of the population. So topics in genetics (Who Am I?), neuroscience (How Do I Think?), medicine (Swineflu), cosmology (Where are We in the Universe?), particle physics (Hadron Collider), biology (Synthetic Forms of Life?) and mathematics (Infinity?) have all proved popular.

However once SciCafes try to engage with more socially and economically deprived cultures problems start to emerge.

- Some of these are economic – transport problems, few cars;
- Some educational – resistance to science and education, lack of questioning;
- Some social – fear of discussion, apathy about involvement, lack of interest in futures;
- Some geographical – isolated country communities or deprived city areas;
- Some religious – antagonism to evolution and cosmology;
- Some linguistic – immigrant communities, refugees;
- Some personal – suspicion of different groups or races;
- Some technological – no computers, or just an interest in Facebook;
- Some financial – any spare money spent on pleasures, not interests.

These problems make it difficult for governments, charities, churches and NGO's to operate successfully in deprived communities, and it is no easier for SciCafes. However some Cafes have made considerable progress.

One key feature is to discuss topics, which are of close interest to particular communities. Often it is not easy to find out what a community might be interested in because they are not used to publicly discussing anything. So there needs to be contacts within the community who are willing to encourage particular topics, ask their friends for opinions, spread the idea of discussion by word of mouth, and take part in the final event. Sometimes projects like this can be time-consuming and not always successful, but at other times they can be very rewarding.

One example was on a deprived council estate in Yorkshire. One single mother there was having tremendous problems with her teenage son. She became interested when she learned that recent research on changes in teenage brains was uncovering unexpected results. She then talked to her friends – many of whom also had teenage children, decided to hold a meeting, found a free church hall and got her mother to bake some cakes to attract an audience of teenagers and parents. A young brain scientist came and talked about ‘The Secrets of the Teenage Brain - Why do Teenagers have Problems?’. The meeting was well attended, discussion followed and a new SciCafe was established.

In Africa the topics discussed are practical and down to earth – ‘How to Live Longer with HIV’, ‘Malaria in Pregnancy’, ‘The Chemistry of Malwa’, ‘TB and the Community’. The growth in Africa Cafes and the practical nature of the topics gives support to the idea that SciCafes need not be limited to educated middle class communities. Indeed the application of SciCafes to different cultures is a learning process – not just learning about different cultures, but seeing how different sciences are critical to public engagement. The variety of sciences and their practical applications show that there is no obvious boundary to Cafes and social engagement. The fact that Cafes have been done in very rural areas like Uruguay, and also Montana, - in prison, and also in Parliament, in Argentina, - in conflict zones, like Gaza – with immigrant groups, in Britain – and on the street in Sweden, shows that the culturally critical element is to find a respectful and relevant method of engaging with each community.

So there is no universal form for SciCafes. Local groups within their own culture develop them. That is why a network is more appropriate than a hierarchy of Cafes. SciCafes will have their own priorities, their own organisational structure, their own limitations and their own opportunities. SciCafes learn from each other.

A key element to science cafes has been their worldwide expansion, already in over 40 countries and every continent. There is no other public engagement group as widespread, and the growth has occurred because the Cafes are a network, not an institution. Individuals and groups have initiated their own Cafes by hearing about them, reading about them or finding them on the Internet. The flexible approach to the location and format of a Café allows individuals to be creative, and the practical experience of choosing subjects, finding speakers and listening to the audience is enjoyable and engaging. Since different cafes can be educational, controversial, practical or experimental and the organisers can be scientists, journalists, educators, university staff, artists or laypersons, the network of science cafes provides a unique international network, which joins up the many different aspects of science and society. This international aspect is greatly strengthened by the Internet, and this is one of the critical elements of the present project.

Science Communication

The context in which SciCafes operate is changing rapidly. When the Café Scientifique started in the UK it was easy to get publicity because it was considered ridiculous to go into a Café and talk about science rather than just gossip with friends. At that time there was little discussion of science outside academia, and little reporting of science in the press.

But in the last decade science communication has mushroomed, and changed. Ten years ago it was about 'public understanding of science', now it is about 'public engagement with science'. It is now a hot topic among politicians, educators, academics, civil servants, scientists and democrats. Each group has its own interests.

- Politicians want to be informed about public attitudes and fears,
- Educators want to create more scientists,
- Civil servants want to 'consult' the public in order to draw up more acceptable proposals,
- Academic departments expand to initiate the cross discipline of science and media training,
- Scientists realise their research grants are linked to public concerns,
- Democratic groups want to change government policies on subjects like climate change.

Now there is nothing wrong with many of these aims. People always use a means to further their own ends, but this is not the public engaging with science, it is science trying to engage with the public. Academics, politicians and educators all say they want to 'listen' to the public, but they are only 'listening' to responses to their own questions. Everyone says that engagement is a two-way thing, but the present fashion for engagement comes from science, politics and academia, rather than from the public.

So where does the Science Café stand in the spectrum of public engagement? Here are some of the distinctive features of the Cafes

They have moved discussion into the public arena. Now academics want to go public, not just the public wanting to be academic.

There is no brief to defend science at all costs. This provides a free and open agenda, allowing people to ask awkward questions.

There is face-to-face contact with scientists at a community level. But of course there is also the Internet, which has enabled us to be international and is opening up many new possibilities. It is a network, not an organisation in the traditional sense, so we are bottom-up, not top down. Each Café is independent and has its own interests, depending on the local culture and community.

The audience and the organisers, not the scientists, choose topics. The engagement starts from the public, not science.

So we have no narrow purpose, political, educational, scientific or whatever. The SciCafes will help to bring science back into culture and evenings are spent in a cultural examination of science, from which each member of the audience draws his or her own conclusions. Public discussion is an end in itself – one interesting and enjoyable aspect of cultural exchange. Public engagement will take many forms, but it is important that many of them start from society, with social innovation, rather than from outreach by traditional institutions.

Twenty-five years ago ethics and science were considered two completely different disciplines, but now ethics is crucial to any assessment of a science project and what it will accomplish. In the same way, in twenty-five years, ‘public engagement’ will be critical to scientific projects and SciCafes are a critically important way of introducing engagement.

So if the aim is just to promote discussion, how will this change anything at all? Many people think that talking is not taking action.

However, a central issue for social scientists, concerned with the conditions necessary for modern democracies, is the emergence of voluntary associations of individuals, especially when they are formed outside the realms of both the political institutions of the state and the intimate ties of the family.

One current theory is that the networks of people engaged in interactive artistic and cultural pursuits create bonds of ‘civility without civil society’. The respect shown for other individuals who have similar interests creates a common civility. The civility nurtured in these networks provides patterns for relating to people with whom one only shared ‘weak ties’, rather than the strong ties of the family and politics. In this way new communities of interest and people are formed. Furthermore, weak ties are the strong force behind changes in modern polity, commercial economy and national society. The networks, created by the new community of interests and voluntary associations, matter more than the older, ‘hard categories’ of class, status and gender. In this way, in the modern world,

social change is encouraged more by voluntary networks than by institutional planning.

There is no higher purpose in SciCafes other than being stimulated to consider and talk about subjects relevant and important to peoples' lives. But that produces a new community, based on a common interest. Also the breadth of subjects discussed, from genetics to cosmology, and the quality of information and discussion, often undermines what the audience are told to believe by the media, government, advertisers and other powerful institutions. This provides people with an independent base for thought and action. Informal discussion of science is popular because there is a social and cultural gap between science and popular culture. Informal dialogue is likely to expand in many different directions but its popularity and independence are important in this rapidly changing culture.

Teenage Cafe

In the report presented by the European High Level Group on Science Education we read of an alarming situation in science education:

There is a decline in young people's interest for key science studies and mathematics.

Girls are less interested in science than boys.

The origins of declining interest are found mainly in the way science is taught in schools.

Despite a large number of projects, the signs of improvement are still modest. In the same report there are some suggestions to improve science teaching.

It is important to promote inquiry-based teaching methods (IBSE) that are proved to be more effective.

It is necessary to involve in the process of science education scientists, researchers and universities.

It is necessary to promote the participation of cities and local communities in collaborative actions.

Key actors in science education are out-of-school science education organisers.

So SciCafes in schools are in a region of educational turmoil. When Junior Cafe Scientifique, or simply Cafe Sci, started in 2004 it was an import to Britain from France. Cafe Scientifique Ltd won funding from the Wellcome Trust to create a network of cafe events in schools in the North of England, where there are now around 100 schools Cafes.

The model is closely related to the evening cafe. Again, the aim is to hold the event in a non-academic context. In schools, this means in a common room or dining area, not in a classroom, and outside the curriculum, meaning at lunchtime or after the end of lessons. The topics are whatever young people are interested in, but generally cover the same ground as the evening cafes. The emphasis is often on the social or ethical dimensions of science: cafe sci is different from a science club, where people do practical experiments or learn facts about science. A speaker is invited, who might be a young scientist or another expert. The talk is followed, as before, by debate. However, the events are usually shorter, typically with a ten-minute talk followed by twenty minutes or more of discussion. Rarely would an event exceed an hour.

A Junior science café is a science café organised by a group of high school students. With the guide of the teacher, they must:

- Choose the theme of the science café, starting from their interests and their questions.
- Choose one or more researchers who will be invited. This is done through researches on Internet, libraries, and links with universities, assistance from public engagement groups, etc.
- Choose the way in which the topic will be developed: interest questions for students, subtopics to deepen, etc. The teacher will help the students to study the topic starting from their questions.
- Meet the researchers before the science café in order to set up the lineup of the event.
- Choose readings and/or brief films about the topic.
- Organize the event open to a large audience in a public place (school, library, theatre, etc.). The conductor will

be a student.

- Organize all the collected information before and after the science café in a web site.

In the last phases of the organization the students are divided in groups with different roles.

A key feature of Cafe Sci in schools, which distinguishes it from almost everything else that happens in compulsory education, is that the events are organised by students themselves. A teacher might bring them together, but the hope is that they will form a group or committee, and do the work to make the event happen. For example, they might decide on a speaker and invite them; they would publicise the event among their peers in school; they would host the event, chairing the discussion and thanking the speaker. In this way, young people gain valuable experience in organisation and civic values, as well as any exposure to science and other ideas.

Cafe Sci in schools is not just for those studying science. It enables humanities students to remain literate in science, as well as enabling science students to explore ethical and sociological dimensions of their subject. Moreover, it brings together younger students with older students: it is likely to be sixth formers who will take the lead in organising and running events, but younger people should also be involved, not least because they will form the next generation of organisers and continuity will be easier if the entire committee does not move on at once.

Schools cafes are a potentially very important initiative. Unlike almost any other activities in schools, they are not top down. They emerge from the interests and culture of young people themselves. They can potentially empower students to take an interest in key topics in science: bioethics, animal research, GM food, and climate change. But it can also address the personal experience of the students; mobile phones, music, social tagging, personal relationships, etc. Discussion in Cafe Sci gives students a chance to express their views and be heard, and develop skills in listening to others and defending their points

of view. The outcome is a generation of young people who are more confident about debate, better able to construct an argument, and more literate in science. The aim is not to get young people to like science or to welcome technology, but to replace apathy and ignorance with engagement and interest.

In the three main European countries where schools cafes are promoted there are many similarities, but also some differences, as described in this table. One critical difference is that Italian Cafes are not run in schools, and this provides an interesting expansion of possibilities for young people in other countries.

The organisation of a science café has been demonstrated to be an excellent tool to study and deepen a scientific topic with high school students.

In particular:

The entire activity is centred on students. The teacher has the role of guide and facilitator.

The study of the topic is carried out with collaborative and cooperative approach typical of inquiry-based didactics: starting from student's questions, searching for information, debating with peers, etc.

The topic is studied concentrating on scientific concepts and methods rather than on information only. The historical and philosophical aspect of the topic is highlighted.

The collaborative setting stimulates the participation of less interested students and contributes to fight the prejudice that science is less attracting for girls.

The activity stimulates the participation of scientists and encourages direct contact between researchers and students. During the preparation students meet researchers in their working place: laboratories, universities, etc. and have the opportunities of see scientists at work. This stimulates collaboration between schools and research centres.

The public event promotes the participation of cities and local community in a collaborative spirit.

Science is presented as a living subject, encouraging positive attitude towards it. It is well known the crucial role of positive contacts with science at an early stage in the subsequent formation of attitudes towards science.

Generally, school cafes are most successful when there is a

committed and inspiring teacher behind the scenes who can prompt the student committee. Input from outside - for example from the team at Cafe Scientifique Ltd - has been vital in creating and sustaining cafes. At this stage of the development of schools cafes, the effort is to find outside agencies - perhaps university outreach teams, or initiatives to promote achievement in schools, or to promote science education, or science centres - who can take on the role of supporting the school cafe movement and helping it become sustainable and embedded.

The Scicafe project

The SciCafe project exploits the notion of networking, exchange of best practices, and co-operation between science cafes in different cities and regions of Europe, both in their physical vicinities and in virtual space. Scicafe operates as a vehicle for the promotion of the public understanding of science and of the public debate on scientific issues, focusing specifically on the promotion of a scientific culture at the local level. More specifically, the SciCafe project uses an innovative approach that crosscuts the boundaries between the already existing initiatives, focusing not only on the improvement of organisers' knowledge on how to develop and maintain a Science Café but also on increasing the participants intrinsic motivation to learn and understand about scientific issues, which could potentially change their attitude towards science and encourage them to follow scientific careers in the years to come. Therefore, the project creates a European network of Science Cafes in cities of different geographical, demographic and cultural characteristics. This network is unique in offering tools and activities combining physical presence of its members in the existing science cafes and virtual presence of members from across Europe and the world, ensuring everyone's high-quality and active participation, irrespectively of their physical location and possible disadvantage (e.g. citizens living in rural areas). Thus, the network achieves the broadest possible geographical coverage of Member States and Associated countries. In this hybrid (physical and virtual) world of science cafes, the network brings together relevant actors from the cities who are involved in science, culture, entertainment, education, local economical development, citizens' participation, and the media, such as local authorities, outreach structures of universities and research centres, science communication structures, schools, libraries, local civil society organisations, enterprises based on science and technology, etc. All these actors are facilitated by the network structures and operations and collaborate to exchange views and experiences on how physical science cafes in

Cities and virtual science cafes in cyberspace can be developed and contribute to the promotion of science culture in local settings, with a special interest in the role that cities and other

local communities can play as agents reinforcing the links between science culture and society. The positive impact of this exchange will reach far beyond the involved science cafes and cities, including cyber-citizens from across the world, and will also inform the relevant science in society policies of the European Union and its member and associated states.

The Project is funded under the FP7-SCIENCE-IN-SOCIETY-2008-1 call in the "Exchanges and co-operation of local actors on scientific culture" theme. The consortium is highly diversified with 12 partners from 8 different European member states. The consortium comprises of the following organizations: knowhow S.A. (Coordinator), Videnskabscaféen, University of Lyon, University of Warsaw, Ellinogermaniki Agogi, Associazione Culturale forma Scienza, Café Scientifique, University of Florence, Hellenic Telecommunications & Telematics Applications Company, Digital Broadcasting Channel GmbH, Provincia di Brescia and St. Stan University

Learn more on the project and our activities at:
<http://www.scicafe.eu/>

How to start a café

Before you start

Are you interested in launching Science Cafés in your town?
Then make sure you have:

Enthusiasms and Commitment – life is not all cakes and ale...

Teammate(s) – one Science Café organiser is enough, but two (or more) is better; split the tasks, discuss and enhance your ideas together! The bigger the team, the better!

Time – Science Café is not a job; Science Café is a hobby that takes up a considerable amount of your leisure time. Once the project is launched, keep it alive! Busy this month? Forget about skipping the meeting organisation! Science Café must simply go on!

Internet, Telephone – no communication, no love...

Survey Results – is anybody interested in visiting discussion meetings of this kind at all? Ask your friends, colleagues... Is there a university or specialised centre with experts nearby?

Partners – approach café owners, local newspaper offices, radio stations...

With Science Cafés you:

- Learn organisational skills;
- Meet inspirational people and learn new ideas;
- Help the others broaden their horizons;
- Make new friends;
- Enrich your local community;
- Help create a civil society in your town;
- Have research findings at first hand; and
- Last but not least feel good about having launched a meaningful project and new activities in your town.

Ready, steady, go!

So you have an interest, team and time. You think of various topics to be discussed. Now, it is high time to find the right venue, day and time. All the rest comes easily after...

Venue

Finding the right venue for the Science Café meetings is the most important step you need to take. Ideally a café with a separate tearoom or entire café where you can meet without disturbing other café guests not interested in your scientific discussions, the venue should be conveniently located (preferably in the city centre). Make the café owner happy – bring new customers, turn the café into a full house, help the owner get revenue. Remember that discussing the topics, Science Café visitors and guests need some refreshment. By making their orders, the café is not “dead”!

Can you use a data projector in the café? Is there a screen or a simple white wall? If so, borrow the data projector from the café owner or ask at the local school, university, and company nearby – enhance your discussions by projecting photos or images!

Science Cafés are about the right atmosphere. Try to find a venue where this atmosphere can be created easily!

HINT: No right café found? Head on! Look for a restaurant, club, and library... The more informal the venue, the better – school premises are not the ones (although they can serve the purpose for a while when other options fail)!

Day and Time

Ideally, hold the meetings regularly. In Prague, for instance, Science Cafés take place every second Tuesday of the month – our guests and we always know when we meet next, the dates can be told well in advance of several months, the café knows when to expect us...

Choose the day your town likes – on Mondays, people usually feel like not going anywhere (first day at work), on Fridays or Saturdays they go out, on Sundays they get ready for a new

week... Where, for instance, a popular film club already takes up Wednesdays, shift Science Cafés to another day.

The same applies to the Science Café time (start hour) – think of when people in your town usually return from work, when the opening hours of your café are, when the public transport runs... In Prague, we start at 7 p.m.

HINT: The periodicity with which Science Café meetings are run depends solely on you. We recommend holding the meetings once a month – Science Cafés remain popular, fans cannot wait to go and see, let alone find their time!

Who to invite, what to talk about...

What to choose first – a topic or guests? Linked together, both depend on the situation; one can be adapted to the other. Are you interested in some topic? Find your guests! Do you know some interesting scientists in your hometown or university? Contact them and ask them to present their work to the public! Following either path, never underestimate the selection of your guests and topics!

Science Café topics may touch not only natural and social sciences. Organising the meeting, always choose one major topic only – make sure your guests and visitors know what to expect. Narrow the topic with your guests by their specialisation.

Selecting your guests, make sure they are true experts in their field of interest. Popularising serious and professional scientists and research activities, Science Cafés generally avoid inviting guests to whom science is a hobby. Another key criterion worth following is that your guests have something to say to the topic. Make sure your guests and topic are in harmony – avoid political and religious issues!

Contact your guests well in advance – ideally several months before the given discussion meeting is held. Inviting your guests, remember to introduce the idea of Science Café. Noting the audience will consist of laymen, ask your guests to present their activities in a less formal way. The goal of Science Café is to portray the science as an adventure. Since not all scientists

are aware of this objective, remind them they are not going to give a lecture at the university to informed students but rather have an informal discussion with non-experts interested in science.

Select guests from your nearest location (at least for the first Science Café meetings) so that they do not need to travel far. We recommend inviting two guests – not only they can complement one another perfectly but they may even save your evening (especially when one of them does not turn up at last). Always inform your guests of the other from their presentation and discussion pair (or the one you approach simultaneously). The first guest you approach may also suggest himself or herself whom to invite.

With your guests, discuss what they are going to talk about each so that their presentations do not overlap but rather complement one another. Where your guests are colleagues – knowing each other from work – they can discuss these aspects themselves (with you playing only a minor role in their discussion). Ask your guests whether they need a data projector – and obtain it as described above. Ask your guests for a short annotation of their presentation – and use it on your invitation to the Science Café meeting, on your Facebook fan page, Twitter and other.

Advertising Science Café

Place, date, time, topic, guests... Who is missing here? Science Café visitors! Uniting people of all ages, Science Café discussions are often visited by enthusiasts regardless of the topic discussed – they simply love Science Café meetings; they always learn something new. Attracting your visitors, you may use media channels and technologies described in the next chapter.

Ready? Go!

Three days before the Science Café meeting, check with the café

(or other venue of your choice) that your meeting is planned and can be realised

Do the same with your guests – write an email letter or ring them three days ahead. Exchange your mobile phone numbers with them (and ask them to ring you if necessary – for instance, if they are late, etc.).

Think of your discussion host. Ideally, nominate a team member; or ask someone from the university or library nearby. No top host skills are required – the host welcomes the audience, explains the Science Café principle, introduces the topic and guests, and moderates the discussion afterwards. Usually, those interested simply ask their question that the guests answer – there is no need to point at someone and call for a question. The host, however, is supposed to have their questions at hand, just in case the discussion is hindered a bit at first. The host, additionally, should make sure the discussion is topic-oriented – no indecent talks, political agitation and/or presentations of a similar kind are accepted. At the end, thank your guests for coming and invite the visitors to another Science Café meeting. Optionally, thank your partners, too. Remember to speak aloud and clearly, making sure everyone is heard regardless of the place they sit or stand. Hosting a discussion is nothing to be afraid of – hosting a discussion is a unique opportunity; hosting a discussion is fun!

Appoint a Science Café photographer. Take photos decently, without disturbing your guests and visitors. Avoid long exposures and excessive lights...

Arrive in the café well in advance to make everything ready. Ask the café owner for permission and place the Science Café logo on the café door (scissors, cardboard and sheets of paper may be of use!). If necessary, arrange the tables and chairs – in doing so, follow the inherent café design and only turn the chairs for the visitors to see the scientists nicely.

Make an audio/visual record of the meeting – remember to ask your guests for their permission first! Spreading information to the others interested in the given topic, recordings in sound quality may additionally be placed on our website; or simply write a brief article on the discussion meeting and publish it on the website or elsewhere.

Prepare feedback forms. Ask your visitors about the Science Café meeting and venue; ask them for their tips and hints on

future topics and guests... After the meeting, collect the forms in person or have them collected in a box. Remember to ask your guests for feedback, too!

Let's talk money!

Science Café is a voluntary and non-profit project – profit generation is not the goal. On the other hand, your costs and expenses need not to be outrageous – they can be minimised quite well. The venue can be obtained free of charge, and so can be the guests. Just in case, inform your guests of the royalty-free principle applied – so far, none of our guests has expected or claimed their fee. In Prague, no admission is charged, either; in some cities and towns the entry is charged at maximum CZK 50. Admission collected may be used to pay for the refreshment of your guests (scientists) – it is a golden rule to pay for their drinks (the refreshment may, optionally, be obtained from the café free of charge). Printed, your own posters may well be obtained at low price. The only costs and expenses you may experience are the ones of your phone calls and petty activities. Optionally, try to get your own sponsor to finance the poster printing or your activities as such – approach a local newspaper, company, and university... Get informed on grants awarded by your municipal authorities to popularise/promote cultural and leisure activities. Get experience, have several successful Science Café meetings over and done with and approach your sponsors.

What else? FAQ's!

How long does one Science Café meeting take?

Given by the interest of the audience, the discussions usually take approximately two hours. A three-hour debate with an endless questions-and-answers session, however, may be no exception. It is the host whose is to decide when it is appropriate to end the discussion. Inform your guests well in

advance to reserve their time – the avid public likes to continue the discussion in a less formal way after the session officially ends.

What if only just a few people arrive?

Directly in the café, the situation cannot be saved. Recovering from the initial shock, think of what might have gone wrong and prevent the situation from repeating. Insufficient promotion? Concurrent event? Unattractive topic? Inappropriate venue?

What if the guests excuse themselves a couple of days before the meeting is to start?

Where two guests are invited and one of them excuses themselves – no problem! Where two of your guests excuse themselves, ask to be recommended another specialist or find guests from a similar field. Look for options – do not let the Science Café meeting be cancelled; keep your fans and visitors interested!

Technology for the SciCafés

Introduction



Traditional SciCafé are almost technology-free, except maybe that needed in coffee and/or beer preparation. An idealized SciCafé is just a conversation among one or two experts and audience. Most of SciCafé starts from an inspiration of a few people, sometimes just one or two.

The biggest problem they have to start such an experience is to find an appropriate place (not a conference room): comfortable, easy to be reached and possibly with a bar; i.e. a pub, a coffee, a reading room etc.

However, as we shall see in the following, as soon as a café grows to more than a bunch of people, technology is needed. We shall review here what can technology, and especially Internet and the web, do for traditional SciCafé, while in the next chapter we shall examine what a SciCafé can do (and look like) when transported on the Internet.

Audio and video requirements.



As we have said, a small SciCafé can be organized without much hassle. One has just to contact an expert and a group of friends. However, it is often the case that the "mission" of our organized is not just that of spending pleasant hours together, but rather that of "spreading" knowledge (and a critical approach to knowledge) among as many

people as possible. Since the SciCafé formula is addictive, the

participating group starts growing. Assuming that the location is large enough, as soon as the group exceeds a few tens of participants, audio amplification becomes a must.

Although it is generally provided by the hosting it may happen that the supplied service is not satisfying, or it is completely missing. A home stereo set and a general purpose microphone with a long cable (for gathering questions from public) are generally sufficient. A perfect solution for allowing people from public to participate easily is to have a wireless microphone that nowadays may cost around 50E.

However, one might have the need of recording the audio, maybe mixing what is collected by the microphones with the output from a computer or a DVD player. Again, a stereo set might be sufficient, although one of the best compromises between costs and benefits is that of an amplified mixer, with several inputs and some outputs, say: loudspeakers (or an already present amplification system), a recorder (which may be a PC, using the program Audacity for instance) and possibly a streaming system, which is discussed later. Very cheap audio recording can be done with a simple mp3 portable player (20E) attached to the amplifier system (headset plug). Another useful tool is a beamer. Although it is not recommended to present long slide shows, it may be useful to have prepared a file with presentation to show the relevant images or movies when the discussion touches a given argument. A beamer is however rather expensive, so it is generally borrowed from some place (say, the university) or already owned by the host place. The hardware tools that might be useful include also a photo camera, for taking pictures to be put on the web site, and maybe a video camera for video recording or streaming. Photographs are so common that one may take them for granted, but it is nonetheless a task that has to be organized. Someone should be in charge of taking pictures of the attendants and of experts.

Video recording is a quite different subject. A dedicated person is needed, and there is also a certain amount of post-processing work. One should also consider what is the target of such a recording. Just for documentation? Should it be put on a web site? Distributed on DVDs? Used for TV or WebTV shows? The

type of distribution medium affects the type of recording and the post-processing. For instance, if the goal of the video recording is documentation, a fixed-camera set up and a low-resolution down sampling might be the right choice, so that people can download it quickly. However, if the video serves just for showing the most interesting points of the event (advertisement), leaving the documentation purposes to audio recording or text transcriptions, it might be worth to have a dedicated operator, that zooms on the public, maybe adding an interview to experts.

A PC may be useful for showing slides (but is generally brought by experts), while a second PC is needed for most of the more sophisticated tasks (audio recording and audio/video streaming). This introduces the next chapter: web and Internet.

Web and Internet

Any event needs a certain level of advertisement. Traditionally, this task is accomplished using flyers or leaflets (distributed by hand or sent by mail), posters, postcards, etc. We shall come back to this "paperworld" in the section of advertising.

The simplest and cheaper way of advertising is nowadays using the web and Internet: web pages, email, and social networks.

Web pages



A web site is cheap and its address, say www.myscicafe.net can be easily communicated. On the site one can describe the "mission" behind the group that promotes the SciCafé, the account of the group itself, the list of activities and their description, etc.

There are many providers that furnish web space for free or for a very low cost; alternately it is possible to install the required software on a dedicated computer (generally hosted by some other organization, such as a university). The web space may be given "as is", so that the user has to design both the contents and the presentation (i.e., the text and the HTML/CSS/Navigation) or the content may be inserted using a content manager system.

An "empty" space allows the use of sophisticated web editors, like Dreamweaver for instance, animations (flash effects), etc. A good web designer would find himself at home. However, this freedom comes at a cost. A site for a SciCafé is obligatorily dynamic: events have to be added, comments are welcome, after an event it might be useful to add a follow-up like the textual transcription of the discussion or an audio/video recording. If all these manipulations of the contents require the intervention of the "web manager" the organization may become critical (there is a "bottleneck").

A possible solution is that of using a content management system that allows multiple authors to collaborate, possibly distinguishing the permissions for different areas. More sophisticated tools, like Wordpress for instance, include a workflow management, so that for instance an article can be prepared by a collaborator but not published until it has the approval of some controller. It is the typical workflow of a newspaper.

Another possibility for avoiding the bottleneck is to use a wiki approach. A Wiki system is just a site with content management software that allows all people or just a selected group to edit the content of pages without knowing HTML and without using specialized software. These tools are quite apt in the presence of an active community, and are heavily used for software development, or for writing the documentation of a project. The most known wiki is of course Wikipedia.

Such tools may be installed on a dedicated computer, but it is also possible to rent some space on a server with the software

already installed on. This is generally a preferable solution, since the administration of a server is a heavy task: one has to deal with hardware failures, attacks by hackers, disconnections, and backups...

E-mail



Electronic mail is certainly the most common (and again, cheap) way of communicating. Many providers offer free email addresses, and most of the attending people have an e-mail address, and these can be collected during events. It is therefore natural to use this medium to distribute information.

As all communication channels, also e-mail has an etiquette (or netiquette in this case), and following the accepted rules predisposes favourably people to get the message. First of all one should avoid spamming sending only important messages. In addition, we should always give people the opportunity of removing themselves from the list. The use of a proper mailing list software (instead of just a distribution list) can be useful: appropriate software allows people to unsubscribe, to browse the archives for past e-mails, and checks for loops (that may cause e-mail bombing).

Short text messages (sms) to portable phones might be an alternative to e-mails, but they are generally expensive. It is a pity, since most of people own a cellular phone, and the "phone interface" is surely the most accessible, also to elder people that might not have e-mail access. More on this interface in the streaming section.

RSS feeds



RSS (real simple syndication) is a way of distributing (or signalling) news on web and on portable phones. They are just a list of titles/contents formatted in XML and usually signalled by a small orange "alarm wave" square sign. By clicking or subscribing such a feed, one can add to browsers (or other services called aggregators) a list of posts. "News" pages, like for instance twitter posts conveniently assemble RSS automatically.

Social networks, blogs

Social nets like Facebook, MySpace, Twitter, Buzz, etc. are becoming more and more important, especially for certain segments of population (e.g. young people). They cannot replace web pages, both because they require a sort of subscription, and because it is not assured their permanence (they are private tools) but they are a valuable contribution to the dissemination of messages

Twitter in particular can be useful for easily assembling an RSS feed, and distribute news. Since twitter posts are limited to 160 characters, an URL shorter is handy, and can be found on bit.ly, tweak.tk, etc. See for instance <http://twitter.com/caffescienza>

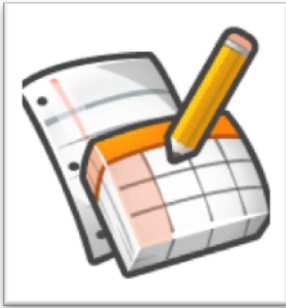
Facebook groups can be very useful in gathering people, especially if there is the possibility of following the event in streaming (audio or video), see for instance <http://www.facebook.com/group.php?gid=60955954928>

Blogs are other channels that may be used, especially if a discussion about some theme is welcome. From our survey, people love to have a long transcript of an event and discuss it. Blogger can be used for free blogs. See for instance <http://caffescienza.blogspot.com/>

Another channel to be evaluated is social tagging/bookmaking (say Delicious for instance). They are simply a way of sharing bookmarks by adding description to them.

If video material is recorded (see below), it is possible to open a channel on YouTube for regular posting, see <http://www.youtube.com/watch?v=iXna9NgYQhw>

Integrated solutions



One of the simplest and cheapest solutions is that of using the suite by Google (Google apps), composed by a content manager for web sites (Google pages), mail, shared documents, calendar. They are free for nonprofits organizations.

Using this (or a similar) solution, allows to set up a complete suite:

Google site allows writing pages using the wiki concept (actually it based on a wiki content management system called jotspot, bought by Google). Using the Google apps suite it is possible to manage users. The pages can contain text and images, but also other gadget like documents (from Google documents), maps (Google maps), calendars (Google calendars), videos, etc.

Google pages may contain news and offer RSS feeds.

Google documents (ex writely) allows editing texts in a way similar to a word processor. The interesting point is that such pages may be published as web pages or as blogs, or embedded into a (Google) site. Moreover, each page can have its own sharing permission, so that a person can have the right to change the relevant page but not to edit other pages.

Gmail offers mail capability.

Google groups give mailing list management.

Google calendar can be used to present scheduling of events. See for instance

<http://www.google.com/calendar/embed?src=soq1dopuinbp h9jt0n1rb72nd0%40group.calendar.google.com&ctz=Europe/Rome>

Google maps might be used to geographically localize events. See for instance

http://maps.google.it/maps/ms?f=q&source=s_q&hl=it&geocode=&ie=UTF8&hq=&hnear=Viale+Caprera,+35,+57123+Livorno,+Toscana&msa=0&msid=115036634744882597285.000480d3e88e6131fe79f&ll=42.098222,6.525879&spn=10.739771,18.94043&t=h&z=6

Blogger can offer the blog part. Actually, it is one of the few ways of allowing a discussion on a web page (Google sites only allow discussions from registered members).

The web solution should be complemented by getting a suitable (and short) domain name, like for instance www.myscicafe.net. It costs around 10 euro/dollar a year (for some domains like .org or .net), but there are even free solutions (like the .to domain). See for instance <http://www.borgoscienza.tk>

Videos and podcasting



Audio and video recording can be made available by attaching them to a web page (podcasting). For audio, a simple editing program like Audacity is sufficient, and using a free library like lame it is possible to produce quite compact mp3 files.

It is not so simple for video. First of all it is not possible to record the video of an event without an operator, since the camera has at least to turn towards the intervening people. Video files moreover tend to be large and the formats are not always compatible.

One of the simplest ways of making videos available on web is of course YouTube (it could be used also as an audio channel, by adding images to an audio stream). It is strongly suggested however that a YouTube video be used for a short excerpt or for

advertising, since the whole record of a SciCafé is probably quite monotonous and there is a limit of about 10m. See for instance <http://www.youtube.com/watch?v=iXna9NgYQhw>

In any case, the preferred format for video at present is flash (fly), since the relative plugging is installed in most browsers. Mencoder (mplayer) or Transco can be used for video conversions.

Distance participation

If the SciCafé becomes popular, or if its public has difficulties in getting there, there may be the need of developing some form of distant participation. This is certainly one of the most difficult and demanding features to be added, especially if the meeting does not take place always in the same location.

One may need to allow distance participation either to the experts or to the public (or both?). Have also a look to the next chapter, concerning completely virtual SciCafés.

For expert participation the easiest solution is via Skype (or another video call system). A good Internet connection is mandatory, preferably via ADSL even if UMTS connections may be sufficient. A laptop, a projector and an amplification system with microphones are also mandatory.

For public distance participation there are other solution, none of which is completely satisfying (a specialized conference software/hardware would be needed). Essentially one can use Skype again, or some kind of streaming audio and/or video (for instance by setting up a web radio or a WebTV), or finally using standard telephone calls. (see talky for a telephone service and dimdim for web conferences)

For any solution, it is preferable to disable audio calls from the distance public, unless one has at his disposal a true conference system, since it is difficult to manage this channel. One can ask people to put questions via SMS or via e-mail or (preferably) using a text chat.

We have not yet investigated this point in details, but it seems that Skype does not scale well with a number of participants greater than 10, probably due to the fact that Skype is a sort of peer-to-peer system while a real teleconferencing system would need a server (reflector) that streams the contents to participants.

This streaming might be done using web radio software, to be installed on a separated server connected to Internet via a large upload band (probably larger than standard ADSL). The idea is that at the meeting the signal is picked up by a PC and sent to a server. The server waits for incoming connections from the clients and when established it serves the stream. Both components could run on the same computer, if the band with is sufficient. We have experimented with icecast and upstream with success. The same philosophy applied to videos, but with larger band requirements (see <http://www.dbc-tv.com/>).

Another solution is that of joining an existing web radio or WebTV.

Low-level distance participation could be implemented using a text chat or twitter "twits" (and a human "typewriter").

Second life can also be used for streaming (see <http://www.dbc-tv.com/>).

Advertising



In our experience, advertising is an unpleasant, expensive but necessary task. The main channels, beyond the (obvious) web pages are email alerts and paper flyers/posters. The last ones are the expensive part, and a sponsor is often needed. A big saving is that of printing the whole season program on a single flyer, but obviously this requires preparing the program well in advance.

For email advices, it is useful to collect addresses during events (and remember to keep low the number of messages per

month).

In order to have an identifiable "brand", posters and flyers may share a common makeup with website.

It is recommended to send press releases to radio and journals, even if they are often ignored.

Support and donations



SciCafé do not need much money, to work at the fundamental pace. However, it is easy to increase the need for funds if location is not free, if management is not done on a voluntary basis, etc.

Funds may come from institutional sources (say university, research centres, municipality, state, European Union), from private supporters (banks, etc.) or from individuals (participants, members). It is often easier to get support in

A simple way of collecting donations (or associative quotes) is via pay pal that offers also the possibility of a credit card, useful to spend the collected money without transferring it on other accounts, or having a dedicated bank account. Another, still experimental way of getting donations is Flatter, which is however still in development.

A quality view



As we have seen, there are many things that can be done with the generic scope of "improving" a scicafé. However, since every action requires a certain

investment, sometimes in money but always in time, and produces some good - bad or mediocre output, it may be worth to evaluate if the benefits are compared to costs. This is not a static evaluation, but rather a process that may be inspired by what is a quality evaluation scheme.

The idea is simple:

Identify who is interested to your initiative: people, institutions, and commercial enterprises.

Identify their needs (themes, location, how should the event be configured (at first these are merely guesses, of course).

List your resources.

Plan a way of satisfying the needs of your interested parts with your resources.

Identify the "measures" that you can perform on your activity (number of people coming to events, email contacts, satisfaction surveys... and set up your goals (possibly in a quantitative way).

After some time (one year?) compare the effective measurements with the targets. Reallocate the resources in order to better accomplish the goals, or re-examine some estimates: interested parties, their needs, resources, satisfaction politics, and indicators. This is a never ending loop.

Scenarios

Introduction

The scenarios are designed to show the practise, theory and methodology of new SciCafe projects, whether using local communities, virtual communities or novel methods.

The object is also to show how Science Cafes can adapt to technology, culture and economics as well as expanding in many different ways.

The Scenarios include those that have already been accomplished and also those that are planned during 2011/2012.

The form of the Scenarios is described as follows:

What is the goal of the Scenario?

Who are the partners?

What role do the partners play?

How will it be implemented?

When will it be implemented?

What are the challenges and how will they be overcome?

How will it be validated?

Details of the Scenarios

Scenario 1: A Science Café Season Broadcast on the Web

Goals

The goal is to broadcast an entire science café season on the Internet, in order to involve a larger audience allowing people unable to physically come not only to follow the discussion but

to actively participate as well.

Who are the partners?

formaScienza, Rome

assaggi science bookshop, Rome

DBC, Zurich

What role are they playing?

formaScienza: organises the science cafes (competences in science communications). Contributes to the dissemination (large mailing list and involvement in stakeholders communities)

assaggi science bookshop: hosts the event (as public place), supplies the Internet connection for the broadcasting.

DBC: offers its Web channel and all the technical assistance (competences in communication technologies).

How has it been implemented?

The science café has been organised with two experts from two different fields that discuss a topic with an audience. A short time has been dedicated to the presentation of the theme and a longer time to the debate.

The broadcasting has been performed using a simple personal computer with the free software “Flash Media Encoder”, two microphones, an audio mixer and a webcam.

For further details, see the document “report on streaming”.

When was it implemented?

From November to June 2011, once a month.

What are the challenges and how have they been overcome?

The main challenge was to involve the audience in the discussion. This has been done by means of a “chat window” next to the video in the Webpage where the science cafe was broadcasted.

What are the challenges and how have they been overcome?

The main challenge was to involve the audience in the

discussion. This has been done by means of a “chat window” next to the video in the Webpage where the science cafe was broadcast.

Scenario 2 - "radiomoka"

Goals

Explore new communication media, in particular radio, for science communication, report on caffescienza events, and increase participation. Radio is a popular media, although not interactive, but can be useful to complement a face-to-face interaction. Since a long time we used radio for free advertising and interview before the caffescienza events.

Our target is moderately young public, younger than the usual Caffescienza public, since Novaradio is a community radio followed also by teen-agers.

Partner

We contacted several local radios, proposing to broadcast a resume of the caffescienza events, related interviews with experts, and other news. However, radio transmissions are expensive, and non-commercial radios have to find supports either from sponsors or from the proposer. The cost can be lowered consistently by performing scripting, recording and montage “at home”, with free software. We therefore decided to experiment, during the season 2010-2011 with a community radio (Novaradio) that asked quite a little support (2000 E), funded by the SciCafé project. We were originally asked to stream the audio record of a science café, so we planned episodes of 45 minutes every two Sundays at 20:00. However, after experimenting, we decided that the format of a face to face meeting is too different from the radio one, and therefore we planned to divide each episode into sketches 3-5 minutes length, divided by music clips. We used a popular format with two speakers: a male acting as “the professor” and a female acting as “the student” (both non-professional). In general the student serves for stimulating questions, breaking long explanations of the teacher with everyday examples, and also for putting into evidence the “inhumanity” of the professor.

We developed informative series broken into episodes: radio sex (evolution of human sexuality), bestial physics (popular physics, introduced by a well known song), radio aphorisms

Implementation

The general scheduling of an episode is

- Signature tune (1 min)
- Introduction (a comic sketch) + music (4 min)
- Resume of a past event, with interviews, separated with music (15 min)
- Two-three episodes of an informative series (15 min)
- Presentation of upcoming events (10 min)
- Closing

Scenario 3 – Family Science Cafes in Museums.

What is the Goal of the Scenario?

The goal is to provide an open venue for families, older schoolchildren, university students and adults in Museums in Eastern Europe.

Who are the Partners?

Café Scientifique.

The Leeds City Museum – The Natural History Officer
Leeds Education Department – communications officer.

What Role are they playing?

The city Museum has started to hold Science Cafes once a month, on Sunday mornings, in the Museum Café. Because parents often bring their children at weekends to the Museum to see a range of exhibits there is the opportunity to hold a Science Cafes for parents and children. The Museum can display some Natural History exhibits, which are relevant to the topic to be discussed in the Café.

The Leeds Education Department are happy that the Cafes have educational content, so they are helping by informing all the secondary schools in the city of the details of the Museum Cafes. This means that pupils over 16 can attend the Cafes on their own.

How will it be implemented?

The Leeds Museum Café has been running for four months and has been successful. It is now being extended by informing schoolchildren and also university students of the topics to be discussed at the Cafes.

A report will be given to SciCafe members about the innovation in Leeds and Eastern European Countries will have the opportunity to start Cafes in Museums.

When will it be implemented?

The European Cafes will have the opportunity to start this autumn. The Leeds Museum is in contact with other museums in Europe and Africa and will inform them of the project.

What Are the Challenges and How Will They Be Overcome?

The challenge for the Museum is to find speakers and subjects, display artefacts, organise informal discussion in a Café or an open area, advertise events, communicate with education authorities and liaise with universities.

SciCafe organisers, who have the experience of starting up Cafes, will assist these challenges.

How will it Be Validated?

Museums want to encourage more visitors, and the Café is a way of doing this and enlarging their audiences. We will receive reports of how many Family Cafes have started up, and whether they are becoming popular in different areas.

Café Scientifique helps by suggesting speakers and topics to the Museum. It will also help by co-ordinating with SciCafe members to encourage Eastern European Museums to start Family Cafes.

Scenario 4 -Local Food Science Cafes in Hungary

The Goal

Science Café is a face to face dialogue between experts and laymen; an event where, for the price of a cup of coffee or a glass of wine, anyone can participate in topical discussions with leaders in the fields of science and technology.

In Gödöllő we organise Science Cafes on developing a

Sustainable Local Food System. The goal is awareness rising on local food, where experts are showing benefits and what recent research can tell about it.

Partners

Our main partner in the implementation is the Local Food Council including researchers from the university, local farmers, dieticians, and gardeners.

What Role Are They Playing?

Local community is represented by NGO-s and local residents in the town, and local food enthusiast, a restaurant acting as a host and providing gourmet / experimental vegan dinner. University researchers provided expertise on organics, dietetics, and local food system development.

How will it be Implemented?

Space is limited and registration is required. We organise events in the best coffee house atmosphere where the invited scholars and practitioners give a brief preliminary talk and then the audience is invited to join in and start the conversation.

Scenario 5: "standard caffescienza Firenze"

Goals

Promote discussions about everyday topics with non-specialized public, citizens' participation, birth of similar experiences, public fidelization. Target adult public, from high school and University students to elder people.

Name	Role
Caffescienza Firenze	Organizer
CSDC, University of Firenze and ISC-CNR	Promoter, small financial support
SMS Rifredi http://www.smsrifredi.it/	Hosting
Municipality of Firenze	Support, printing of fliers and posters, advertising
Novaradio http://www.novaradio.info	Advertising, related radio transmissions

Radiospin, University of Firenze (Prato location) http://www.radiospin.poloprato.unifi.it	Audio streaming, podcasts
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Scenario 6– Streaming SciCafes to Palestine.

Goal

Science Cafes in Palestine occur in universities, as the venue needs to be safe. However there is a problem with speakers travelling in Palestine. The aim is to provide speakers via the Internet and to stream the Cafe between the UK and Palestine.

Partners

Duncan Dallas Café Scientifique.

Dr. Adman H. Yahya, Professor
Vice President for Academic Affairs

Bizet University, Bizet, Palestine

Prof. D. McLennan, Leeds University.

JFR DBC-TV.

Roles

Des McLernon is a Professor of engineering and frequently visits Palestine. He has contact with Professor Yahya from Birzeit University, who has agreed to enter the project.

JFR will assist the streaming and Duncan Dallas will help to select the speakers and chair the meeting.

How Implemented?

Bizet will organize the venue, advertise the Café and arrange the audience, who will be students. JFR will liaise with both the UK and Palestine for streaming. Prof. McLennan will organize a student audience and venue in Leeds University and Duncan Dallas will suggest the subject and speaker. The Leeds Museum Café has been running for four months and has been successful. It is now being extended by informing schoolchildren and also university students of the topics to be discussed at the Cafes.

A report will be given to SciCafe members about the innovation in Leeds and Eastern European Countries will have the opportunity to start Cafes in Museums.

When?

Autumn 2011

Challenges?

Communication is often unreliable and circumstances in Palestine are difficult, so there are practical problems. In the event there are two audiences, and how the discussion can be controlled may prove interesting. However it is original to have two audiences from different countries and cultures, and the idea of engaging them via Cafes is original.

Validation

It will be successful if a number of Cafes are held and are then expanded to other Palestinian universities

Scenario 7 -Gdansk Science Café

What is the goal of the scenario?

To show the participants of the summer school (generally, University students and young researchers) the methodology of the science café, and let them reflect on some topic related to the school outside the usual practice of just listening.

Who are the partners?

The participants to the school, the organizers of the school, and the local hosting institution. In this case, the organizers of the CoNan (Computational Nano Technology) school and the Technical University of Gdansk

What role are they playing?

They constitute the public and maybe the experts.

How will it be implemented?

Simply by advertising during the school, and collecting people after lunch in a hall.

When will it be implemented?

It was implemented the 10/8/2010
<http://www.caffescienza.it/programma2010-2011/the-second-foundation>

What are the challenges and how will they be overcome?

To motivate the participation of the students. We advertised during the lessons.

How will it be validated?

By the participation of the public (almost all students), the length of the event (almost two hours) and observing the following discussions.

Scenario 8-Slow Food Science

The Goal

In the last year a consortium of Italian science cafes has been constituted, which puts together the realities existing in the different places of Italy. The first goal of this scenario is to realize a first common project of Italian network of science cafes.

One feature of science cafes is the consumption of food and drink. The second goal of the scenario is to pay attention to food that is consumed, realizing a science café where the food is of good quality and complies with local uses.

In Italy there is an ancient culture of food, with many different typical traditions. Italians love good food! In recent years, the attention to the quality of food is increasing, so that many companies were born which aim to make quality products. In the Italian territory there exist several research centres in agri-food: the third goal of the scenario is to discuss issues related to agri-food research, in order to bring scientific issues into the public debate.

The partners.

The partners are

Caffè-Scienza Milano (www.caffescienzamilano.it)

Caffè-Scienza Firenze (www.caffescienza.it),

FormaScienza Roma (www.formascienza.org/caffe.asp)

and the Condotte Slow Food of respective cities. The possible participation of the cities of Bari and Cosenza is being defined. We are planning to involve research institutions and productive realities in the field of agric-food sector.

Role of partners.

The project is collaboration between the Italian science cafes network and Slow Food. The first one will manage the aspects related to the public participation in an open event, with experts qualified on scientific issues. The second one will manage the aspects relating to culture, food consumption and production in accordance with principles of quality and attention to human and natural environment. Both partners will exploit their strong links with the territory.

Implementation

There will be three science cafes in each involved city: Milan, Rome, Florence; the participation of the city of Bari and Cosenza is to be confirmed. The science cafes will have the same theme: the research in agri-food. Slow Food will choose the menu of the meeting. We would like to give sequel to this experience with realization of a DVD, which could collect the most significative contribution of all science cafes.

Timing

A meeting was held on June 9th 2011 in Florence, while the others will take place between October 2011 and June 2012.

Challenges

The first challenge is to create a network of local science cafe activities in different cities, in order to facilitate comparison between different modes of development and enriching the individual practices. To this aim a national coordination was set up last year. This scenario represents the first joint project of the Italian network of science cafes. The activities of this scenario will be coordinated by the science cafes in Milan and Rome.

As we have said, as a result of the growing pressure from consumers' associations, which want assurances on the impact of products on health and environment, in Italy in recent years there appeared in the agri-food some companies aiming to be marked for the quality of their products. This quality is achieved for example through the choice of production methods (organic farming, zero-kilometer, etc.). This scenario will offer the opportunity to create a link between these productive realities and the research centres in agri-food. Slow

Food has in fact relations with the realities of production, while the network of science cafes will identify the researchers who have developed knowledge in agri-food.

The proposed science cafe, through collaboration with Slow Food, will set up a communication with these realities to discuss the conditions, in particular, that could create a link between these realities and the research centres in the area. Slow Food are in fact in touch with the realities of the production, while the network of science cafes in the area will identify the researchers who have developed knowledge in food.

The cycle of science cafes can help citizens to orient themselves in consumption, reasoning on subjects such as nutrition and health or nutrition and sustainability. The discussion starts from the concrete proposals of the menu that one consumes during the science cafes.

Another challenge is to stimulate new science cafes in places where there were not before. For example, in the city of Cosenza, we intend to rely on existing debate centres around the G.A.S. (acronym for "Gruppi di Acquisto Solidale", Solidarity Purchasing Groups), and networks of critical consumption (Network "Utopie Sorridenti"). We want to include the scientific contribution in these debates.

The final challenge is to access to national funding, submitting joint projects.

Validation

The scenario will be validated by the number of participants in the meetings and the satisfaction of the public, investigated through questionnaires of satisfaction.

Scenario 9 - Science café in Second Life

Goal

When a Science Café venue is successful there would be sixty to one hundred people attending. This is a rather limited number compared to exhibitions or television shows. Until now the argument has been, that it is impossible to obtain the quality of

the intimate dialogue using modern communication platforms where thousands of potential science café audiences could meet simultaneously.

We think the time has come to challenge this viewpoint. Through 2009-10 several science cafés from Europe have collaborated on setting up a science café in 2. Life on a global scale.

With the experiences from the beta version we will argue for, that the cultural diversity between the science cafés all over the world could even add a new dimension to the science café in the format of 2. Life. The reason why being that the cultural diversity will find its way into the dialogue on science and its societal implications and produce a new outcome.

Partners

Cultural diversity can be illustrated by outlining a hypothetical Danish Science Café and a Singaporean Science Café where the overall topic is cloning. The composition of the two panels will be the same as regards professional expertise, for instance a biotechnological scientist, a theologian and a science sociologist. The biotechnologists will contribute a concrete insight into cloning technology while the theologians will each have a background in the religious tradition of their respective countries. In other words, they can discuss cloning from the perspectives of Buddhism and Christianity. Finally, there is the science sociologist who can provide an insight into how popular beliefs about cloning are inspired or influenced by fiction and the media, and show the effects they have on the public's attitude to cloning.

The Role of the Partners

1 The Danish attitude to natural

A classic Science Café will take its point of departure from the questions identified as being the most central by the panellists in a preliminary discussion. Therefore, the Danish Science Café debate will begin with the relationship between cloning and the idea of what is natural. Is cloning unnatural? What happens if we move the boundaries between the man-made and the

natural? Is the man-made sufficient? This is an approach that has been prominent in the Danish debate about cloning.

In the Danish context the audience sticks to a discussion of the grounds for the argument of what is natural. In other words, what does “natural” mean? Biologists may argue that cloning happens in nature anyway, as identical twins, triplets and so on are clones. It is also obvious that not very many human activities in the modern world are natural if one applies a pre-scientific definition. In this way, one soon reaches the conclusion that modern man is a creature wrapped up in a finely woven tissue of technologies, and yet we still possess a vivid and strong belief that the natural is good whereas the unnatural is undesirable or dangerous.

The question is whether technologies such as cloning challenge this belief, for the simple reason that we see that clones do not differ from animals (or humans) that have entered the world in the 'natural' way? The discussion will thus often begin with culturally based perceptions of cloning but by demystification the debate can be lifted to a more nuanced level.

2 Pragmatic Singapore

In the Science Café in Singapore, the cloning debate takes a slightly different course to that in Copenhagen. The idea of what is natural is not at the centre. Instead, the interest is centred on usability and its limitations.

Cloning of human beings is in fact forbidden in Singapore, and the official explanation is in line with the prevalent international opinion: cloning of humans offends human dignity.

Nevertheless, attitudes to human cloning are a lot more varied than they are in Denmark. This is apparent not least in a survey carried out amongst college students who had taken part in a bio camp, where they received lessons in life sciences. The students were asked what they thought about cloning of humans and asked to draw up a list of its potential advantages and disadvantages. Initially, the students did not think that cloning of humans should be allowed.

Reservations here are not so marked – on the contrary in fact. Singapore has very liberal legislation regarding research into stem cells and the country has opened up to therapeutic cloning. In this connection the national bio-ethical committee has held consultations with ethnic and religious groups and they have concluded that the embryo has a kind of 'intermediate status'. It is not merely a lump of cells but neither is it a human being. Therefore it can be used as 'a means'. The dominant religion in Singapore is Buddhism and the discussion in the country has thus taken place largely on Buddhist terms. On an overall level, one can say that their stance is 'relativistic'. When it comes to evaluating a given biotechnological application, the judgment depends on the specific context. Thus, the Buddhists ask: is the purpose of therapeutic cloning to do good or to do evil? And they conclude that if one destroys embryos in order to save the living, then it can be accepted.

Implementation

Second Life has been around for more than 10 years now and has today more than 21 million accounts registered.¹ Second Life is special in many ways, most of all because it is very remote from the logic of a computer game. The goal is not to win, but to explore the world around you through interactivity with the environment and other users.

The Virtual Science Cafe will offer the opportunity to remote visitors to exchange ideas in 2. Life, via the voice function or via classic chat. Besides the concerned real life community, attendance is possible for residents in 2. Life interested in science, for which the Virtual Science Cafe can become their main scientific meeting point. An automatically actualized panel will permanently inform about the program, the dates of the different events and their locations in the real and virtual world.

Thus, the virtual science cafe further aims at:

- Examining how different countries and cultures adapt the form of the science café to local needs.
- Discussing whether new technologies could enable the content of cafes to be more widely spread

- Finding ways in which underdeveloped countries and rural communities could start science café
- Engaging in a critical debate on the relevance of science cafes to community
- To develop a series of innovative scenarios that will introduce innovative methodologies on how to organize and realize Science Cafés, aiming also at the development of “virtual” communities of practice that will consist of people who work in science both from the research and industrial sectors as well as from the wider public, interested in specific fields.

The virtual science cafe aims as well at using social tagging techniques to explore the potential for user-generated descriptions of the subjects under discussion to improve communication and understanding of scientific issues and encourage engagement with scientific content. During the virtual presentation of the different subjects participants will be able to add their contributions and understanding (through their PDAs and mobile phones) to a common database system that will allow for further analysis later from the project experts. The data analysis will help the project team to understand and explore the participant’s potential conceptual change to the subjects under discussion.

The virtual science café is a real meeting and virtual exchanging point, offering use of all the current communication technologies like web, video, audio and metaverse, allowing experiencing scientific protocols via adapted interfaces. During the event, questions could be raised for all the attendants to answer. The answers could be sent through an e-mail or SMS message. On receiving of a new message, the listener mechanism will take the appropriate components (SMS text and originator or email text and sender) for further process. Through a statistical results web page a pie chart or a progress bar could be seen for every question presenting the percentages of the attendants that have been answered and not. The answers could also be seen through this web page along with the contributors’ names.

The web page will be auto-refreshed so the progress bar will be changed dynamically and the moderator will be able to see the

state of the answers at any given moment. Furthermore, the application will be web based and therefore there will be no need for installing any additional software in the computer in order to access the platform. There is only need for Internet connection, a projector and a Java enabled web browser. Forums and discussion areas could also take the form of a virtual SC where contributions will be able to participate to discussions using email or SMS messages. People from around the world will have the ability to attend the conversations that taking place in the virtual SC environment through fixed or mobile devices anytime/anywhere. After the event the attendants will have the ability to send SMS and email messages to declare whether the conversation was useful or not and if their questions were actually answered in the framework of the discussion. Statistical results for the users' satisfaction could be viewed through a different web page providing feedback for the conversation's moderator.

Challenges

If you want to reach the broader public and engage them in public debates on new technologies and the implementation of these, you have to undertake untraditional methods. It is hard to make the public pay attention and it is difficult to make them engage. Like the Danish philosopher Kierkegaard said, "You have to meet people where they are". But if you succeed, there will be a much better understanding of scientific political necessities, and it is definitely worth it. In Both Denmark and Greece it is our experience that the broader public wants to engage in science communication if you take them seriously and really want to speak with them.

Concerning the cultural diversity, we are positive that the discussions will not look like something that could be achieved in either Singapore or Copenhagen, but may end up being something entirely different because of a new synergy. Now, synergy is a buzz word, but if we look at the use of the broad expert panels where experts and an audience that have interest in the same topic, but from very different angles there is a willingness to listen. Listen to what one another has to say, and we know that the science café concept has been an eye-opener for many a guest – and even some researchers and scientists as

well. This will also be within the scope of the virtual edition of a science café and even in broader terms because scientific diversity will be cobbled with cultural diversity. The cafés in the virtual realm will therefore not only mirror the globalised world, but add an extra dimension to the science café and to the contextual understanding of science in a cross cultural perspective. In this perspective it is good to remember that Science is not only science, but always exists in larger existential as well as societal contexts.

It is therefore a hope that science café enthusiasts and everybody that have not tried to be a part of a science café or that do not live near by will try out science café in Second Life and continue the dialogues and open discussions on a new platform. We normally say that the Science café concept is a public good. And even encourage people to steal the concept and to reformulate it in terms of cultural preferences. Now we have created the platform that suits this purpose.

Scenario 10 – Schools Cafes in Uganda

Goal

The objectives of Cafes in Schools in Uganda are

- To promote informal discussion of science by pupils and teachers rather than just learning scientific facts to pass exams.
- To encourage university teachers and students to talk in schools about their personal research.
- To go beyond the schools curriculum and relate science to practical problems in health, to the importance of digital technology and communications, and to imaginative topics like cosmology and neuroscience.
- To present science as an accessible and universal subject, not the culture of highly developed countries.
- To talk about what the pupils are interested in - whether science fiction, aliens, magic, personal relations, films or dancing – and relate it to scientific thinking about the modern world, in relation to ethical, social and political

aspects.

Finally the goal is to take the Cafes into schools upcountry, away from city centres and into the country.

Partners

Discussion of Science has been encouraged by

- Many Schools, as they have very little equipment, large class numbers and an orthodox curriculum.
- A number of major universities, as their outreach is poor and science communication is at an early stage.
- The Uganda National Council of Science and Technology,(UNCST)
- The Uganda National Academy of Sciences. (UNAS)
- The International Network for the Availability of Scientific Publications (INASP)
- The African Technology Policy Studies Network (ATPS)
- The Wellcome Trust

Role of Partners

Makerere University has provided a large range of speakers for schools around Kampala. The university is keen to encourage science communication with its students and also keen to be involved in outreach.

UNCST is a Government organisation designed to encourage science development. It has organised a Science Café Conference as part of Science Week in 2010. 20 schools and over 200 pupils attended and 3 simultaneous Science Cafes were held.

UNAS encourages engagement of CafeSci with INASP. This promotes a series of Cafes involving schools, parents, politicians and scientists to discuss contemporary issues in science.

ATPS has promoted the Science Café Conference and other meetings with financial assistance.

The Wellcome Trust has provided Café Scientifique with an International Engagement Award to pay for a Ugandan Co-ordinator.

Implementation

The Co-ordinator, Betty Kituyi, has worked for almost 3 years,

starting the project and developing it. She contacts the schools, talks to the interested teachers, performs a preliminary Café to show pupils and teachers how informal discussion works. Then she responds to subjects the pupils say they are interested in, finds a speaker and arranges a date for the Café, which she usually attends.

Most of the schools are boarding schools, which give the pupils more time to meet. However the problems are lack of public transport (which is why they are boarding schools), high cost of mobile phones, which are the best form of communication, poor Internet access for many, and payment for the speaker's private transport.

However some schools are now organising Cafes themselves and the plan for the future is to start School Cafes out into the country, away from Kampala. This needs the assistance of universities in the nearest towns. The number of schools is expanding and the Cafes are receiving good publicity, as in <http://www.globalpressinstitute.org/global-news/africa/uganda/international-program-fills-science-education-voids-uganda>

When Is It Being Implemented?

The next stage of the project is starting this autumn. New Cafes are starting in Mbale, north of Kampala, and Fort Portal, near the Congo border, and local universities are providing assistance. This expansion will continue for another year.

Challenges

There is a growing demand of the program from upcountry schools and communities. Partnership with local and international organisation has helped to hold cafes upcountry. The 2011 regional Café Scientifique on GMOs and tree planting, sponsored by INASP brings together students teachers and members of the PTA in schools to engage with other key stakeholders. The program is using this forum to popularise café scientifique and also lobby for the support of the program in schools.

Accessibility to schools out of Kampala can be challenging. There is need to acquire a vehicle. We are encouraging schools

to co-share the cost of the speakers transport. Getting committed organisers for the adult café and keeping members motivated has been a problem. Currently, the regional Café Scientifique meetings are used to market the concept and identify people who can organise regular meetings. Upcountry café participants cannot afford a drink and this brings conflict with the venue management if the venue is offered for free. Members are encouraged to buy a drink whenever meetings take place. Future plans for this group involves planning for a refreshment, venue fee and transport refund for the speaker. Lobbying for support for other donor agencies has helped in meeting some of the above challenges.

Sustainability of the project is a major concern. Slowly, other partners are getting on board. Strengthening partnerships with UNAS, UNCST, ATPS, INASP and others will help to get support for some of the activities.

Scenario 11 - "cafferenza"

Goals

To favour discussions on specialized topics for which the caffescienza scenario is not suitable and to target adult public, from high school and University students to elder people.

We noticed that caffescienza on specialized topics, still attracting public, have difficulties in starting the discussion since the attendees have little previous knowledge on the topic. We noticed this in a clear way on a caffescienza on "hydrogen, the fuel of the future".

We therefore decided to adapt the caffescienza formula in order to allow a longer introduction (and thus only one speaker), along the following strategy:

Regular scheduling prepared in advance, for printing of flyers, fidelization and advertising. Meeting with only one experts and a limited public (less than 100 people). Specialized topics, everyday arguments are subject of the caffescienza scenario. Public room with free access and bar service. In order not to require sponsors, we keep it simple with no drink or food offering. After dinner. Due to the room and the expected public, we need audio amplifier and microphones. Strong connections

with web site, social web services (twitter, Facebook) and Radio transmission (see RadioMoka scenario). Scheduling has to avoid clashed with other events like football matches.

Partners and Roles

Name	Role
Caffescienza Firenze	Organizer
CSDC, University of Firenze and ISC-CNR	Promoter, small financial support
Municipality of Firenze	Hosting (Biblioteca delle Oblate), support, printing of fliers and posters, advertizing
Novaradio http://www.novaradio.info	Advertizing, related radio transmissions

Challenges, weak points and improvements

Streaming would be extremely useful, but the existing network bandwidth dir not allowed it, nor was it possible through mobile phone connection. The room used (in the main library) is certainly fascinating but too small. Moreover, there is always the risk of disturbing readers. We therefore propose to change the room to a bigger one (although too similar to a conference room), and to ask for a better network connection.

Validation

We had a public ranging from 30 to 55 attendees for each event, collecting 14 feedbacks and 26 questionnaires. The recorded material was used by radio Spin for a daily summer program of half an hour <http://www.radiospin.poloprato.unifi.it/?p=2326>. The caffescienza site (www.caffescienza.it) in the season period 12/10/2010-12/7/2011 had 7500 visitors, 12.800 visitors, with an average of 9:30 minutes on the site. The mailing list info-caffescienza has 157 members. Caffescienza has 57 Twitter followers.

Scenario12- EcoCafes in Botanic Gardens

Goal

Botanic Gardens worldwide do practical research on trees,

plants and flowers. They are accessible to the public and they present the opportunity to engage in discussions about ecology and sustainability. Cafes are an obvious way of doing this and they will also attract more people to the Gardens.

Partners

Atlanta Botanic Gardens, USA
Denver Botanic Gardens, USA
Tooro Botanic Gardens, Uganda
Café Scientifique, UK

Partners Role

In Denver and Atlanta Botanic Gardens SciCafes take place. They attract schools and also family events. The Atlanta Garden has a connection with Tooro Botanic Garden in Eastern Uganda, where there was recently a Café involving pupils, teachers, university staff and scientists. Atlanta has suggested encouraging Botanic Gardens worldwide to use Cafes to promote ecological discussion. The others will support this.

Implementation

The success of Botanic Cafes in America and Africa will be the starting point for developing similar Cafes in Europe. In the Tooro Café the subject was 'Tree Planting; Indigenous Versus Exotic Species' and the discussion was about the importance of Tree Planting in the changing global environment. This attracted over 100 local people, many of who went out to plant trees in the Botanic Garden after the Café. Because of the Café the local university declared support for local Cafes and another Café in the Garden is planned for November.

The American Gardens will help to contact similar Gardens in Europe, and to give them examples of successful Cafes. Café Scientifique will assist with the communication and also with suggesting speakers.

When wills Implementation Take Place?

2012 will be the starting point. There is going to be a special

Café Presentation at The American Garden Meeting in Ohio and that will be a good opportunity to gather information and spread out the activity during the summer months.

Challenges

Contacting suitable people, discussing topics and organising events will take time, but the idea that more people will come to the Garden, especially young people from schools, will be an attractive proposition. Also the experience of the American Gardens should provide support for the idea of Cafes and encourage topics in ecology.

Validation

A starting point would be to find out how many new Cafes in Botanic Gardens start next summer, and how many are further planned for the winter.

Conclusions

It is clear from the variety and scale of the scenarios that SciCafes are developing widely. The form of the Cafes provides the space and opportunity for innovation in style, topics, technology, education and activity. The Cafes will continue, diversify and be used for many purposes in different circumstances. This project provides the opportunity for SciCafes to communicate with each other, to learn from each other and to establish a library of information, which will encourage others to develop their own style.

Into the world

In this section we are collecting testimonials of people that have founded or just discovered a Science Café somewhere in the world (maybe even farther.)



Australia

Melbourne, Australia

Science Issues Cafe is based in Melbourne, Australia. It is supported by the community with no institutional backing or funding.

The meetings have been a blast, and we have yet to have a “dud” speaker.

The beginning

A few years ago, I saw an ad saying that Prof. Alan Trounson, stem cell researcher, was giving a public talk at Monash University. I was interested in attending, but Monash is in the south-eastern suburbs.

I live in the inner city. The prospect of driving across town through peak hour traffic on a cold wet night was too much for me, and I didn’t go. Instead of bemoaning my fate, I decided to organise something over my side of town.

The speakers

I am a lay person with an interest in science. The first thing I did was to make a list of topics, which interested me. About a dozen topics came immediately to mind. Then I set about looking for speakers. I looked at university websites, I chose people who seemed appropriate and emailed them. At first I was not sure whether they would require speakers fees, so I asked them about this as well as whether they would be willing to speak. No-one has wanted a fee. I have been pleasantly surprised at how willing our scientists are to give their time and speak to the community, even on a small scale. So I had a list of topics and speakers who had in principle agreed to speak.

The venue

Next I needed a venue. I considered the options. I had attended a "Philosophy Cafe" which was at first held in a pub (Australian slang for a bar in a public hotel). The venue was free, and members could buy their own drinks at the bar. However, it was very noisy and crowded, and we could hardly hear each other speak. So we relocated to a Council of Adult Education classroom. The tutor brought along some glasses and wine. "Philosophy in a classroom" doesn't sound as sexy but it worked better. An important issue was cost. Pubs and restaurants have free function rooms, but participants are expected to buy drinks and meals, which some people might find prohibitive. I was discussing the idea with a neighbour who runs a cabaret and theatre group at a local community centre. She said they were thinking about holding a Friday night discussion group in one of their classrooms. So I went along to a committee meeting and put forward my proposal – a monthly discussion group open to the public, in which a scientist would be invited to come and talk about his or her field and lead the discussion. The committee were delighted to take Science Issues Cafe on board as a project. The venue was not free, but the room hire fee was between \$35 and \$50, depending on which room we used. I calculated that I could cover the cost of the hire plus a couple of casks of wine and biscuits by asking participants for a small donation. \$5 has become the standard amount.

This covers the meeting costs. Another participant and I have paid for the cost of the website hosting and domain name out of our own pockets.

Our name

A word on our name: Science because our topics and speakers represent some field of scientific endeavour; Issues because as well as getting the scientific background, we always end up discussing a broad range of political, philosophical and policy issues; and Cafe because although I decided not to literally locate the meeting in a cafe, I wanted to retain the glass of wine and informal atmosphere that the word “cafe” suggests.

First meetings

So by this time, early 2005, all we needed were participants. I roped in as many friends and people who were contacted by word of mouth as I could, so that I would not be embarrassed on the first night. I also put an ad in the daily newspaper, *The Age*, which has a free listing of events. This attracted three people. Our first meeting, a talk by Geoff Taylor, the head of Physics at Melbourne University, was attended by about 12 to 15 people. Geoff talked about the state of physics, in the light of the centenary of Einstein’s 1905 publications. Since then we have continued to meet monthly, and we are starting our fifth year. We still have plenty of topics to cover and willing speakers.

Kaye Hargreave <http://www.scienceissues.net/>

New Zealand

University of Waikato

There are a few places around New Zealand that organise Café Scientifique. In the North Island, in Hamilton and Tauranga, cafes have been run on a regular basis for several years now with the support of the Faculty of Science and Engineering at the University of Waikato.

The Hamilton branch of Café Scientifique was set up in 2004, and as this was an Olympic year it kicked off with a discussion of drugs in sport. This wasn't the first Café in New Zealand – Dunedin has that honour – but Hamilton was the first to run continuously rather than occasionally (as in Dunedin, where early Cafés were associated with the NZ Science Festival). The first Hamilton organizers were University of Waikato staff Penny Cooke and Alison Campbell, who was inspired to begin it by hearing about the UK version; they were joined in 2006 by their colleague Marcus Wilson, who now runs sessions along with Cheryl Ward. They decided to run sessions every 6 weeks so there would be time between events to find speakers!

That first Café was held in the mezzanine floor of a local pub, and around 40 people turned up to participate. The pub owner was keen to host the Café but after 2-3 sessions the noise from downstairs was too much to cope with, especially as many in the audience were older and had difficulty hearing the speakers. As it turned out, the publican owned another establishment in the central city and offered the use of it – free of charge – on a regular basis. So the Café moved from the Cook to Café Brewtique. Our 'regulars' (30-40) followed us and the audience grew, so that when particularly contentious topics (e.g. fluoridation of town supply water) came up, it was literally standing room only with around 100 in the audience.

Since then the Hamilton Café has moved around a bit – Café Brewtique was sold and morphed into a brothel. As the Dean of the University's School of Science and Engineering was supporting us – hosting a website and providing photocopying for fliers, plus funding travel for speakers going to Tauranga – we felt having a Café in the new establishment was perhaps not the best look, so we shifted up the road to another friendly pub, and then another, where the Café is currently based. As a university city Hamilton has a plethora of pubs and the drink-meal-talk-and-discussion format works well in these venues. It worked even better once we acquired a small (ish) sound system after frequent requests from members of the audience and has had one of our speakers bring their own!

The Tauranga branch, established by Kathrin Otrell-Cass, also experienced a few changes of venue, but despite this has been running Cafés regularly and uninterrupted since 2005, approximately every 6 weeks from February until November. Since the season started in 2010 the Tauranga Cafés have been held at a great venue, Alimento with very supportive owners. The Tauranga team consisting of Kathrin, Raewyn Oulton, Andrew Cass and Mark Bennett also work closely with pub/café owners to see how they can be supported. So typically we help on the evening with any tidy up work and encourage our audience to visit the venue again.

While Tauranga has a small satellite campus of the University it is not offering any science courses and there are few opportunities to engage in science communication. There is, for example, no museum in Tauranga. This could be a reason for the continuing success of the cafes in this location. On average the café in Tauranga attracts 60+ people and it is not rare that the audience size reaches 100. We work closely with the local press and the event is regularly featured in the local free newspapers and the local radio station. Despite the close alliance with the University the Cafés are not venues to parade solely University scientists, but we aim to select science speakers from a variety of sectors to reflect topics that are of relevance to the people in this region.

These days we try to plan ahead, selecting dates for the year and where possible arranging speakers well in advance. Topics are selected in consultation with the speakers, and sometimes we'll aim to have a particular topic at a particular time: in February 2009 we kicked off the year with a session on Charles Darwin, while a session on water fluoridation accompanied a City Council discussion of the pros and cons. Sometimes speakers and topics are also chosen that venture outside the traditional science topics including the science of music or the curious correspondences of Albert Einstein, thus interesting wider audiences who may otherwise not have considered coming along. Usually there's a single speaker, but sometimes it's a dual act and Tauranga features regular panel discussions (something that's been emulated recently in Dunedin). Speakers are asked to talk for 20-30 minutes, and then – after a brief

break for people to get another drink – the floor is opened for questions and discussion.

We use a number of ways to get the message out. A webpage hosted by the University carries each year's calendar for the Hamilton and Tauranga Cafés, plus e-versions of the fliers and also the handouts provided on the night: each speaker is asked to provide a handout of no more than 2 A4 pages, including references for anyone wanting to follow up on something that's been said. Materials from all previous Cafés are also archived on the site. We also print a hard-copy A5 calendar at the beginning of each year and copies of this are given out at Cafés in Hamilton – some regulars take several to leave in workplaces etc. Fliers are e-mailed out to everyone on the mailing list – at least 254 members in Hamilton, at last count; the Tauranga number of subscription is currently at 190. And reporters from the local free newspapers often pick up on a coming Café session and interview the speaker for an article timed to come out before the event. The Dean of Science and Engineering continues to pick up the tab for web services and photocopying, while funding from the local Science Centre's board of trustees covers the printed calendar, dinner for speakers, and in some cases the costs of bringing speakers in from elsewhere in New Zealand.

Inspired by the UK Café Scientifique conference in 2006, Kathrin also ran Junior Café Scientifique in 2009 as a pilot project in High Schools in Hamilton and Tauranga and schools are continuing their interest in inviting scientists to talk with interested students.

The cafes run in Hamilton and Tauranga have become a fixed point in the social calendar of many interested people to get together in a convivial atmosphere.

Alison Campbell, Kathrin Otrell-Cass and Marcus Wilson
<http://sci.waikato.ac.nz/cafescientifique/>

Latin and South America

Brazil

I did my Ph.D. in the US and just outside campus there was a charming Café, called The Global Café. The wonderful gourmet and organic coffee was accompanied by a soft music played alive at the end of the afternoon just on time for our break. Books, newspapers and all sorts of chats were mixed with hot discussions about our diverse philosophical backgrounds for the dissertations.



Besides the warm environ we found a place that, as foreign Ph.D. students, could talk about our difficulties to “survive” in a different country. Most of the time we laugh and made jokes on our own stupidity that arouse by misunderstandings the culture and language (see box for one example of this story). We were not just talking about the differences on American culture but also on the University and Scientific culture. That friendly and non-academic environ was the place to go when we were stressed out with the entire dissertation writing process.

When I came back to Brazil I was already a faculty member at the Federal University of Parana in the South of Brazil, thus I was put into the undergrad classes right away but I was missing the graduate students discussion, the Café warm environ and the US, thus this was my first thought for having a scientific Café in Curitiba. Besides this I was seeking to start teaching on the grad school right away, however, my diploma was not immediately accepted at the Graduate program since it

was from a foreign country. I was informed that if I wanted to teach on the grad school I should go through a very long and slow process of Diploma revalidation. This took almost two years, and made me think deeply on having alternative routes to reach people interested in going to the Grad program. Besides this, the College of Education graduate programs at the Federal University of Paraná are very competitive with almost 1,000 candidates every year for less than 100 places. When some candidates discovered that I was out of the program they came to ask for help to discuss ideas for the writing of the required entrance dissertation projects. In order to help I was contacting people that could discuss and talk about specific subjects that interested these future students. Some of these talks occur even in my own place, in my university office or even in a Café. All these, were a melt pot that made me think about having sessions on a good Café place that we could informally talk about many different subjects and even interest people that could be just browsing books in a bookstore.

Our Story.

Because of lots of misunderstandings along the way my colleagues were teasing me and telling that I should write a book on that to inform international graduate students and make fun of all the embarrassment that I went through.

At some point on my doctoral program I was doing a web design course when the instructor asked us to create a site to advertise a product. I decided that it was time to start this book project for international graduate students, thus I did the course task creating a site that advertised for a book. I created the book cover and listed the contents, however I was not being able to translate the title. The fancy word for mistakes we use in Portuguese is “Gafe”. When I looked it on the dictionary it showed me the word “boo b”, thus with no doubt I translated the book title as “Boobs of an International Graduate Student in the US”.

When I presented that to the class some started laughing and most just did not look at me at all. I could not follow the class. Why were they laughing? The instructor calls me aside and

said:

“Do you know what boobs are?”

Yes, I answered. They are mistakes that we do. I looked at the dictionary.

No, Boobs, Chris, Boobs.

I was looking at her and he hold her on boobs to show me what was that about.

I was totally embarrassed and my colleagues said. Well, now you must write your won book. You already have your cover story.



By the way, later on I discovered why the dictionary showed me the wrong word. On the last few days in the US I talked to an old lady and mentioned this story and she remembered that the correct word should be “boo-boo”, that is another word for gaffe.

In October of 2009 a colleague and I finally could organize two pilot sessions on a large Curitiba’s Book Store chain. I decided to contact this one because this chain grew in the city it is not from elsewhere.

They have good bookstores all over the city and in each mall there is a large and good one. It also has a wonderful website that one could easily find information, a monthly booklet agenda that is printed and available in the front of all stores and could be seen by anyone walking by. The agenda also goes through an e-mail list of subscribed people and recently they added twitter messages. Thus, the problem to advertise the activities would be solved, and we did not have to worry about

it. However, we had a reality check on the first event, in October 2009, because there were only seven people on the audience. Afterwards, some said that they would like to come but it was in a store far from downtown. Others said that the timing was no good because it was on rush hours and everybody wants to rush to their homes and no one wants to come and watch scientific presentations. On the second pilot session we invited a well known scientist to talk about the poisonous spider accidents that is a public health problem that could interest many people, but again we had just few people on the audience. After that, one colleague gave up saying that the effort was not worthwhile and besides this, Guests would not come if they knew that there would be just a few people on the audience.

After that I carry on by myself 'til last month when another colleague joined us bringing other speakers to the table. From the beginning of 2010 we changed for a different store of the same chain, on another mall, that also has a café inside the store and is a bigger mall. We also changed dates, from the first Thursday of the month to the third Thursday, and the activity is a little late than it was, to avoid rush hours. The audience in this case became even smaller. In summary, we are still struggling, we want to go to a downtown store, and however in this chain there are only two stores that have cafes inside, the others do not. Besides this, downtown stores are open to the street, thus because of that they have to follow working hours and close at 6 p.m., so our café's time should be before that. We are still planning on making changes. Next year we will try to do the Café during the daytime, not during the evening. We are certainly not going to give up so easily.

The Café social context.

Children book launched in a parallel session of October 2009 Café.

As the bookstore is not an academic one, we have a diversity of public that have different interests but we usually try to connect it to parents and school interests. Because of that, since the beginning the topic was always related to Education, especially science education. We discussed children' and teachers'

concepts of Fungus; chemicals of poisonous spiders; Role Playing Games as a tool to develop argumentation among science students, sexual education programs developed by the county's primary schools; the use of Fleck's epistemology on science education research, and so on. The public varies a lot but is mostly related to the topics. We did have some people from the university graduate programs, and a few people that were walking by the bookstore and sits to hear the speech, some that were waiting for others while they were choosing books or other materials. I know that there is a Café in Bahia, a state on the northeast Brazil that is much more related to the research topics in Biology, their meetings are inside the university bookstore, however, we decided to do out of the academic environment to open it to the larger public.

The method.

The choice of topics is that the main focus is that it should be somehow related to Education or Human sciences. It could be related to Science or Health Education, to Philosophy or Psychology of Science, or to any Human Sciences. The main objective is that the presenter is able to talk to a diverse audience, not necessarily an academic one. The speech should reach any person in the bookstore. We advertise on the booklet as a small paragraph talking about the speech and a little bit about the person. To ensure that people from the university will be able to go, we also send information through our listserv to students and faculty members.

On the first presentation we tried to connect to other issues, for instance, the speech about children' and teachers' concepts about Fungus was connected to the fungus photograph exhibit; children' book launching on a fungus myth and the exhibit on the drawings of the book. In this case the university TV came to help showing what was going on and interviewing all the involved people. This was very nice, however it was too much work and we could not repeat that for the others.

As a final though we could say that having fun in a Café is very different from organizing a Scientific Café. It requires a lot of effort and we intend to make it pleasant for the people. We did not reach this point yet but we will certainly continue to try

different versions of it and see. Hopefully next year.

Christiane Gioppo

México, Cafe at La Paz, Baja California Sur,



Responsible:

Biol. Cruz del Carmen Juárez Olvera Senior Member of the SOMEDICYT

How did everything get started?

Everything started in February 2007, with the subject "Viajes en el Tiempo" (as the popular tv show "quantum leap"). The next sessions subjects have been very diverse; Nacre and pearls culture, Microbe fossil in the beaches of La Paz, Baja California Sur, México. The stress in our lives. Blue whale secrets on the Gulf of California, Where does the sand of the sea come? Shamanism and Californians funeral rites, Myths and reality of seaweed, from taboo to forbidden: sexuality and adolescence.

In 2008 and 2009 we worked with subjects related to Water Cleaning, the little habitants of the sea, Sweet and dark which delights: Chocolate, Faraway and mysterious landscapes surrounded by the sea. The flight of the butterfly, Sea turtles in danger, Cult to death from primitive times to actual times, The chemistry of love, etc.

After organizing the first popular science certificate a group of interested people emerged to continue and strength outreach activities, so a Scientific Café was organized, as an informal discussion forum which gives people the opportunity to get closer to science through discussing and thinking about one specific subject.

Project based on the Café Philosophique which started en 1962

in Paris by the philosopher Marc Sautet and on the adaptation of Duncan Dallas who adapted the model to popular science.

El Café Científico de La Paz uses the British way, with a hosted presenter who by an informal discussion talks about scientific developments or a subject of his or her area of study.

From the beginning the Café Científico had the support of institutions of education and research of the city as well as the UNAM colleagues. Actually a financial support is being arranged through States Congress term, through the parliament committee of science and technology, as well as the Secretary of Public Education (SEP, Secretaría de Educación Pública). Which are the objectives?

- To favor the familiarization to science in a recreational environment in front of an unspecialized public.
- To favor the academics and researchers participation outside the formal education institutions.
- To make public the results and the application of the actual developing research.
- To contribute to the strengthening of the scientific culture to form well educated citizens capable to take decisions regarding their life quality.

How is it developed?



Identifying a group of researchers willing to collaborate with the “Café Científico” project the program is organized. The appropriate place is chosen, usually where they sell good food and excellent drinks and near to the beach! Also the easy location, parking facilities, appropriate and comfortable space and as said before

affordable menu! The time to be presented is given due to local weather and the hosting place schedule.

How is it popularized?

By designing fliers and posters to be distributed containing the information of the future presentation as well as the name of the presenting host, title of the presentation, the place where it'll take place and brochures with the same information, also designing bookmarks allusive to the presentation.



Café Científico.

Additionally press, radio and television help to the popularization of the presentations by press releases.

The Session.

A warm welcome is given to each guest they have to write down their personal information such as name, address, e-mail, etc. information that is taken to develop a guest directory invited to the

The host researcher is presented to the public, they talk a few minutes about their professional career. Considering the participation in every Café of people not familiarized with the project, an explanation of what the café is, what is the purpose of it and how does it work, so they are fully introduced to the project.

The time estimated for the speaker is 30 minutes, they don't have any visual support for their presentation. Their speech is their only tool. At the end of the presentation the public is invited to ask or comment about the presentation's subject.

The audience is invited to stay so they can keep talking about the subject of the presentation, or make any suggestion about future presentations, and even to have a conversation with the speaker. As the presentation is given in restaurant-bar the audience is invited to stay as long as they want, respecting the business closing time of course!

The discussion is lead freely by the audience, giving the speaker the opportunity to work as the moderator and to give complementary comments to the matter.

Due to the characteristics of a SciCafe, the headquarter has changed 4 times, with the purpose of making the mobility of the project easier on the city of La Paz Baja California Sur, México and it's done the last Tuesday of every month except in July and December being holiday periods.

Achievements.

1300 have assisted through the last three years when it was founded. The average assistance goes up to 50, and the estimated time in average is 120 minutes. We have frequent assistants and we have always new public.

We have also worked with subjects related to social sciences, natural sciences and exact sciences.

The opportunity given by the informal environment is to have a pleasant experience where you can favour analysis and certainly, social coexistence regarding popular science.

Up to date several important institutions have participated as outreach activists such as researchers from CICIMAR-IPN, from the Universidad Autónoma de Guadalajara, personal from Dirección General de Divulgación de la Ciencia of UNAM, Comisión Nacional del Agua, etc.

What's the opinion about the Café Científico de La Paz?

The opinion about the project is pretty positive, the audience is always bringing subject to work with in future sessions and has brought music and poetry to be presented as closure.

North America

North Carolina

Science cafés have been embraced around the world as a way to create communities of people who care about scientific issues and who want to gather to discuss what is happening in current research. In Raleigh, North Carolina our Science Café series is no different, and has grown quickly to become a popular and sustainable program in our local area. It is becoming an important platform for helping to bring discussion of science issues into mainstream conversation. Here are some thoughts from our audiences in Raleigh:



“The first one (science café) I went to probably was the dinosaur one, and you know just the range of age that was involved in that one, of course dinosaurs would have kids, but somebody was saying it is not really focused for kids, but the kids that were there were interested and asking questions, and you know, were not distracting or anything, and to me it's nice that you saw that progression all the way through college students and retirees and working people.”

“I kind of feel like it's a real success when I come away with a question and I go home and I have to look it up on the

internet, because I have an additional question that didn't even occur to me before I walked in to the science café. So it's kind of like an opening for a field day. ...Now I know something more

about it [café topic] and I can find the newspaper more interesting ...”

“I really see the science café as more than what happens in the room that night. I never have been to one because I had a specific question that I wanted to ask the expert. For me it’s all about when I go home and I think about it and ... say I’ll do my own research. ... That’s where I see a lot of the value is getting other people to think about science that wouldn’t otherwise. They [science cafes] can make all of us a little more aware and a little more thoughtful.”

“I think it’s that you have a live person that’s an expert, and you can ask them the questions that you might have. I love NOVA, so I watch that, but you know, there’s so many times I’d say “gosh I wonder what they think about this”, if I could ask them a question. So [in a café] you have someone who’s an expert that you can really ask questions of, and you [café staff] leave a lot of time for that”

“I really love the format I think that it is really driven by the question and answer thing and you can really tell what people come out for. I went to the one on sleep and it was packed. And people had lots of questions, so I like the diversity of the topics. You have a talk like that that is really relevant to everyone and then you can go to another one that is pretty obscure.”

“Science Cafes offer the opportunity to get out of my rut, to see what else is out there in the world and to hear about things a very informal format where its not this professor so and so lecturing about something boring. It’s a casual exchange of information.”

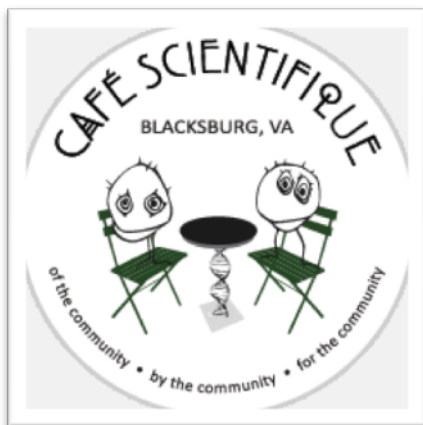
About the Raleigh Science Café:

During the fall of 2006, the North Carolina Museum of Natural Sciences and the NC Research Triangle Park Chapter of the scientific research society Sigma Xi partnered to initiate a science café series in Raleigh, North Carolina. The Raleigh Science Café is a very popular event in our city, and it is also an ideal research setting for our Museum staff, because we have evaluated its progress and growth since its inception. By the middle of 2010, the Museum will have hosted forty two monthly cafés held at the dinner hour on the third Tuesday of the month (held January through November) in various

restaurants in or around the city of Raleigh. Our restaurants are more than willing to offer rental free space (even in exchange for an unknown turnout) on what is typically a fairly quiet night of the week. The Raleigh Science Café audiences (with numbers averaging around 100) are primarily made up of adults. They are recruited through email announcements, both from the Museum and from outside sources such as special interest list serves and social and professional meet-up groups. The presenters for the Raleigh Science Café have primarily come from North Carolina State University, but there have also been scientists and doctors from Duke University, state agencies, and local medical practices who have participated. They represent a wide range of disciplines. The presenters are diverse not only in the areas of science that they represent, but also in age, gender and race.

Katey Ahmann <http://www.naturalsciences.org/programs-events/science-talks>

Virginia



With the advent of multi, inter, cross and transdisciplinary science, we have witnessed many broad-based changes in the way that research and discovery are made. Mathematical modellers now work with clinicians to better understand how disease proliferates in plants and animals, and to predict outcomes and interventions.

We have scientists using plants to develop cancer fighting drugs, and others using wood-based polymers to improve drug delivery. The secrets of the mold have been discovered, illuminating not only how fungi affect plants, but also how mold creates disease in humans and animals. Computer scientists and geneticists work together to make sense of the myriad of data that have emerged as a result of decoding the genome, while biologists use this information to better understand the mechanisms of plant and animal life and provide innovative solutions to everything from food production to the prevention of malaria. Neutrinos are slowly divulging their mysterious properties and nanotechnology is proving a very useful tool in environmental protection. These are exciting and controversial times in the world of science, and a little knowledge can sometimes be more dangerous than none at all. The public is often subjected to imagine implications of science, rather than the scientists themselves explaining the work they do and both how and why it is important.

Café Scientifique has provided a novel and highly workable idea for bridging the gap between the laboratory and the public.

Blacksburg, Virginia is a university town, and while it may not be a large town, the fact that Virginia Tech is primarily a research university has made it possible for our café to bring a wide range of both traditional and developing science to the community. There is more research going on at Virginia Tech than even the university community knows about.

In a university town, faculty and students often become inundated with events and information from their own discipline and immediate field of research. As science has become more interdisciplinary, approaches to research have expanded and diversified to include multiple approaches to the work being done. The cafés provide an excellent opportunity not only for the researcher to step outside of the laboratory and interact with a curious public, but they also provide an opportunity for disparately related fields of inquiry to casually make the connections between what is being done in one laboratory with the work that is being done in another. As such, the composition of our audience continues to be university affiliated, not only with curious graduate students, but with the professoriate as well.

We began our café with a speaker from our sponsor, the Virginia Bioinformatics Institute (VBI). In the future, we hope to involve researchers from Virginia Tech's College of Engineering, who are involved in everything from award-winning robotics to wind tunnels and wearable computers. In addition, we have the Virginia-Maryland Regional College of Veterinary Medicine (VMRCM), the newly formed Virginia Tech Carilion School of Medicine and Research Institute, and the Virginia Tech Transportation Institute. These all represent exciting areas of research, but are merely the tip of the iceberg when you are blessed with a research university in the middle of your town. I cannot foresee ever running out of interesting topics for discussion in the cafés, and the only real problem is working with the very busy schedules of the researchers and getting the public to realize what a fantastic opportunity these monthly cafés provide. Most researchers are delighted to talk about the work they are doing, and our audiences are appreciative, inquisitive and often enthralled.



There are going to be cafés that are just not well attended, and this can be discouraging. Weather is often a factor, but so is marketing and promotion. Our second café was our largest ever, with some 60 people attending. Attendance has fluctuated since then, with regulars as well as new faces appearing every time. Maintaining interest has occasionally been challenged by acoustics and equipment failures at the venue, but for those who do attend, enthusiasm for the subject matter has always remained high. Because we are a small town, marketing is crucial to the success of this venture, and listservs and fliers are proving no longer adequate to influence the busy schedules of people who really want to attend. A website and blog will be helpful, but new social media such as Facebook and Twitter are tools that we hope to employ as well. Getting a tweet the day of the event is often all it takes to remind people who really want to come, when and where the event is taking place. Because the café is only part of my full-time job, it has sometimes been challenging to keep the events going. One of those challenges is booking speakers enough in advance to populate the upcoming events section of the website, thus allowing people to make plans. Having an abstract and title to go with the announcement is crucial as well, and the more provocative the abstract and title, the more likely the event is to draw a large

audience.

We began this café in February of 2009, and VBI's then director was scheduled to be our first speaker. Days before the first event opened, the director had an unforeseen situation that forced him to cancel, and what could have been a disaster ended up being one of the most provocative and entreating cafés we did. Another VBI faculty member stepped in, last minute, and led an exhilarating discussion on Systems Science and Public Health. I think I realized at that point, if the café was going to be a success, I was going to have to be the driving force behind it and find the ways and means to keep it going, even in the face of ongoing obstacles.

Recently, we lost the venue we started out with, and while I momentarily lost focus, I realized fairly quickly that this was a good opportunity to change the direction we had been taking and explore something different. While the original venue had been enormously accommodating, we often needed microphones in order for the speaker and audience members to hear each other. We moved from the upstairs of a large college bar, to the intimacy of a bookshelf-lined back room in a coffee house. A colleague once told me that he prefers speaking to a smaller room filled with people, rather than to a larger room that looks half empty, and even though I would eventually like to expand the speaker venue to include panels of researchers, medical, corporate professionals, and graduate students, the coffee shop feels just right for now. Perhaps the most important elements for maintaining a successful café series are a love of science and extreme flexibility.

Darleen Baker <http://cafescientifique.vbi.vt.edu/about.html>

South Carolina



Our Science Café is called EngenuitySC Science Café, and we're located in Columbia, South Carolina. EngenuitySC started up the Cafes here because we felt it was the perfect concept to connect the community to the fascinating science and technology advances that are made here at the University of South Carolina and the other innovative, science-based outlets in our capital city. We feel that this connection and open dialogue about science and tech topics are crucial for our knowledge-driven world—and a lot of fun!!

I myself am a brand new Science Café organizer, with just one under my belt so far. I'm taking over the reins from our previous organizer, whom once had it passed to her. I can tell by the way that it's hard for her to let go that I, too, will become attached to the role. I think that attachment really comes in being able to indulge your curiosity and creativity with topics, questions, and setups. We choose timely topics, things that are happening in our town and at the Univ. of SC (ex: academic strengths, advances, new professors, local news). But we choose what fascinates us, typically starting with an actual question we have. At first I was intimidated because my background is social science (yes, the soft science). Would I know enough to be able to hold conversations about nanotechnology? Well, yes. I had nothing to worry about. Because we feel like the essence of Science Café is to talk about science and understand it in plain English. Whether or not you can sound like an expert is of no importance—sparking curiosity and learning something new that you otherwise wouldn't—is. And a lot of times seemingly

simple questions have some pretty cutting edge answers (i.e. Why are our local weather patterns the way they are?).

The Café-goers reactions and thoughts will probably be another outstanding part of my organizer role. We have “regulars” and newbie’s each time. On average, there are 30-60 people. I think that’s a good number to still keep it intimate, though we want to grow. Our attendees range in age from kids to retirees, but probably skew slightly older. One goal we have is to target a younger college crowd. We change up our location at different restaurants each time, but are thinking of having just one location soon. Getting the word out is grassroots—through Facebook, website, word-of-mouth. But we may toy with more? We hold it from 6-7:30 p.m. and have had the problem of it running TOO long, which I think is a good problem to have!

I am very excited to take on the challenging, exciting, and endlessly fascinating role of organizer, getting to be the architect of our own little inquisitive community. I’m lucky to have a hand in Science Café, with input and guidance from everyone else who enjoys it. Can’t wait to see where we take it!

Barry Elizabeth Blitch <http://www.engenuitysc.com/>

Texas, San Antonio



Briefly, regarding my experience organizing the San Antonio Science Cafe (San Antonio, Texas, USA) from 2007-2010:

- 1) Started with help from Ben Wiehe of WGBH in Boston and a grant from NOVA ScienceNow. Our chapter of the scientific honor society, Sigma Xi, went to a national meeting in 2007 where he heard of the movement and we received encouragement to start one locally. I was a graduate student at the University of Texas at San Antonio (MS in Biology '08) studying Alzheimer's Disease, and had been

interested in events which would bring together people from all backgrounds who were interested in science and intellectual discourse, particularly faculty and students.

2) We used meetup.com/sciencecafe/ as our launching point, have 200 people signed up, about 30 who attend each science cafe. The current organizer is Mike Larsen. Most people are regulars from various backgrounds (grad students, sigma xi members, science enthusiasts with no formal training in science).

I contributed to a phone interview with Sigma Xi's officers which included Ben Wiehe's presentation on science cafes, which is available through Sigma Xi's website.

3) Themes focused on neuroscience (memory, aging), physics (nanoparticles, cosmology), and psychology (happiness, positive psychology), which are my principle interests and the most accessible topics with broad appeal. This cafe seems focused on science enthusiasts and people who enjoy an opportunity to get out and have stimulating conversation.

4) Choose experts from available Sigma Xi members and UTSA faculty, particularly ones I knew well enough to invite. Meet up site offered good advertising to limited but expanding group online. Fliers in university were helpful.

<http://www.meetup.com/sciencecafe/>

California

I started San Francisco's Ask a Scientist Lecture Series in 2003, having never before heard of a "science café." I'm a graphic designer by day, and was looking for some kind of interesting and fulfilling volunteer work to do for fun, but most of the opportunities I was finding were things like serving meals at homeless shelters, or helping kids with homework, or cleaning up parks. These are all wonderful and important things to do, but I really wanted to find something that would put my particular skills to good use and that I could take ownership of and be passionate about. (I did try tutoring kids but I was horrible at it! And I cleaned up a park but it was HARD!) I also wanted my volunteer endeavour to have a social component—

for people with a shared interest to be able to meet one another, mingle, and maybe even make real friendships. I love science, and love going to science lectures, so I thought that would be a good direction. The idea for a casual, free, fun science series was almost instantaneous—it came out of a conversation I was having over coffee with my mother. Within a day or two I had booked a speaker, put up a web page, and found a café near my house (Bazaar Cafe) whose owner loved the concept.

I later discovered that there were similar programs in Europe, and even one or two in the US, and suddenly found myself part of the soon-to-be-burgeoning science café community. Being a part of something larger than just my own sole enterprise has brought me in contact with dozens of others involved in science outreach, and has resulted in some close friendships as well as great educational experiences. It's also brought Ask a Scientist a ton of publicity, which has been wonderful. As the media started to become aware of the growing science café trend, they discovered Ask a Scientist and have featured us in newspaper and magazine articles, radio stories, and even a couple of TV news segments.

Books, articles, and radio interviews provide me with many of my speakers. If I'm reading about, or listening to, something interesting and the scientist in question happens to be local, I'll look him or her up and extend an invitation. The rest come to me through word of mouth—friends, acquaintances, and former speakers who tell me about someone they know or have heard about who's doing some sort of fascinating research. Our themes have included just about every scientific discipline out there: biology, geology, neurology, psychology, science history, astronomy, physics, chemistry, math, and much more. (<http://askascientistsf.com/past.html>) I'm so grateful to all of the generous speakers who have graciously and enthusiastically volunteered their time to talk with us.

Our attendees range in age from little kids to seniors, but most are between ages 25 and 60. Backgrounds vary too; there's a good mix of scientists (including researchers, teachers, science writers) and lay people. Some come in with a vast amount of knowledge on the night's topic, and others are people who have

just walked in off the street because they thought the event sounded interesting.

One issue for Ask a Scientist has been crowd size. I was thrilled when we kicked off our opening event with what seemed like a huge and bustling attendance of about 40. The program has grown by leaps and bounds over the years, and I'm very pleased that so many more people now get to enjoy it. But with the large crowds have come some challenges. Lines for food are long, the conversation is less intimate, some devoted regulars have given up coming altogether because they can't get there early enough to get in, and occasionally someone turned away at the door becomes belligerent and rude. On the one hand, we old-timers love to reminisce about the cosy, dinner-party atmosphere of Ask a Scientist's early days; on the other hand, I want to make these fun and fascinating talks available to as many people as are interested. I sent a survey out to my mailing list last year, to find out what was on the attendees' minds. I discovered that the majority considers a small crowd size to be ideal, but another majority (naturally there is some contradictory overlap!) considers it a very high priority to accommodate every single person who wants to attend. So over the years I've changed venues a couple of times, now holding events at a restaurant/café that holds well over 200 people. I miss the cosy old days, but I'm glad no one gets turned away at the door. If 200+ people want to participate in these talks, I think that's pretty amazing. And the last thing I want to do is tell them they can't.



Stanford physics professor Shamit Kachru uses familiar objects to try to explain string theory to an attentive crowd. Feb 2007.

Overall, running Ask a Scientist has been a great experience. I've made wonderful friends and learned a ton—not only about science, but also about directing a public event, working with the press, and all sorts of unexpected lessons. I hope it keeps going strong for another seven years!

Juliana Galli

Oregon

Nuclear Science Cafe



Our cafés include a slideshow that touch on the controversial but also provide a modest amount of technical physics, chemistry, health physics,

medicine, policy, and "cutting edge" politics. We associate nuclear energy with, e.g., Technetium-99m ($\text{Tc}^{99\text{m}}$) production, which as you may recall The Economist discussed a few months ago. $\text{Tc}^{99\text{m}}$ is used in diagnostic medical imaging. There is a severe shortage of this isotope, which is used because it gives the smallest patient dose during imaging. Other isotopes have had to be substituted, which give a larger patient dose.

We also are promoting growth of the nuclear (chemistry) infrastructure, which has been destroyed over the past 30 years or so -- I call it the nuclear dark ages. Both of us -- my colleague and I who do these cafés -- are radio chemists. We were two chemists employed as civil servants in the 1970s in a State Laboratory. In those days the federal government supported nuclear power, research was being actively pursued, and the infrastructure -- the radiochemistry and physics collegium -- was actively replacing retired personnel. The nuclear navy in the US still provides a modest number of technical personnel but few collegiate programs remain. Source manufacture is all but defunct. Nuclear infrastructure comes mostly from France & primarily from Russia. Radio chemists have even been

imported from abroad to work in US national labs.

Politicians talk about "the new nuclear" without a clue about what it takes -- in real terms -- to manage a nuclear energy sector. Except for military use and pure research -- the national labs at Idaho Falls (INEL) and Richland e.g., we are in the nuclear dark ages.

Three Mile Island and Chernobyl pretty much did the Industry in. I retired from civil service in 1998 where I managed the radioactive material program for OREGON USA. I took a radiation safety officer position after retirement at a small college that had a radioactive materials program. My job lasted barely 10 years, ending when the college decided to completely close the nuclear program. Hundreds, maybe thousands, of colleges around the US and abroad have likewise abandoned their nuclear programs. They closed because students wouldn't take the coursework. Colleges are businesses: they operate mostly on supply and demand (granted, a few exceptional programs have enough endowment to run a Socratic program but most don't). When colleges don't need the nuclear discipline, the trickle-down effect occurs, resulting in the elimination of the sector. Our goal is to try to help rebuild that sector.

My colleague moved from radiochemistry to the energy policy sector as administrator of the state's energy policy and siting department. So between the two of us we have the nascent knowledge and skills to lobby for safe use of radioactive materials. As you can see, I do get up on my soap box every so often but if the world -- yes, it's no longer just the US or UK or France or Russia -- is going to rebuild the nuclear sector in the name of "green energy" there's a lot of infrastructure that's got to be recreated. We're hoping to provide some of the basis for nuclear support.

Unfortunately political agendas often drive science rather than v.v., but we're bucking the tide to try to show that nuclear can be interesting, safe, effective, and viable as an energy sector. In the slideshow we mention "enrichment" but we do not discuss weapons.

Although we acknowledge that weapons exist and are a worldwide threat, we have chosen to exclude this from our discussion, which focuses on rebuilding the industry for the sake of the planet's health. Nuclear doesn't have a CO2 footprint. Now if we can just boot those students and teachers into teaching and learning nuclear science, we'll have accomplished something ... we're facing 2-3 generations of teachers who know |nothing| about nuclear science. It's those that we're directly targeting in our Nuclear Science Cafés.

Martha Dibblee <http://www.omsu.edu/sciencepub>

Canada, Vancouver



Cafe Scientifique is a forum for discussing and debating science issues which are of concern to everyone. Our aim is to promote public engagement with science and to foster interesting, fact-based discussions in a fun and relaxed atmosphere. Our speakers are

scientists or science journalists, ethicists, or related experts from the local community who donate their time to present and discuss their work with the public. We include a range of topics and disciplines. Cafe Scientifique started in France and Great Britain in the late 1990's, and has now spread all over the world -including Vancouver!

Frequently Asked Questions

What is Cafe Scientifique? Cafe Scientifique is a forum for the discussion of important and interesting scientific issues. They are informal and accessible - much more so than a public lecture.

Who else will be there? Audiences consist of people who are interested in science but generally never have the opportunity to discuss their views with, and ask questions of, someone "in the know". The speakers assume no scientific knowledge, so anyone can participate.

What happens at a Cafe Scientifique? Cafes start with a short talk from the speaker, who is usually a scientist or a writer on science to introduce the topic. After this there is usually a short

break to allow glasses to be refilled and conversations to start. An hour or so of questions and answers and general discussion follows this. Anyone can ask a question, and we positively welcome those which begin "This might be a stupid question, but..." These questions are invariably not stupid and often rather insightful.

Where and When? The Vancouver Café generally takes place on the 3rd Tuesday of the month at the Railway Club downtown, at 7:30PM. Check the website for current schedule information: www.cafesci-van.com or our Facebook page.

What subjects will be discussed? Cafes Scientifique covers a wide range of issues relating to science and technology. Topics covered have included AIDS, the Big Bang, biodiversity, cancer biology, code-breaking, consciousness, Darwinism, ecology, evolution, extreme life, fetal experience, genetically modified organisms, global warming, infertility, nanotechnology, sports science, superconductors, science journalism, biobanking, and more. If you want to find out more about a particular topic, let us know!

Do I need to buy a ticket? Cafes are free and you can just turn up on the night of the event. However, in some venues we may have a limited seating area, which is first come first served. Once or twice a year we endeavour to hold an extended or special café, where we may need a larger venue. A donation jar may be passed for such an event, but it is completely optional.

Does Cafe Scientifique make a profit? Cafe Scientifique does not make a profit from events or pay fees to speakers. We encourage you to patronize the café or pub in appreciation for the use of their space.

Lisa Månsson

AFRICA

Uganda

Life saving learning around the drinking pot

What started as a gathering of educated scientists in Uganda has turned into a social event that is changing the health behaviour of men in poor, rural communities. Sarah Cumberland reports.

When Sam (not his real name) found out that his pregnant wife was HIV-positive, he abandoned her, thinking that it was inevitable that their baby would be born with HIV. He did not know about measures available to reduce the risk of HIV-transmission from mother to baby. "If I had heard this information earlier, I would not have divorced my wife," he said with remorse.

Myths and misinformation abound in rural communities where men like Sam have virtually no access to health information. "When special meetings are held to educate people on health issues, the men don't go because they think health is something

only the women should deal with," says

Christine

Munduru, of Open Society Initiative for East Africa (OSIEA).

"There is a huge need for health information among communities with low literacy because many



people don't have access to media. Health workers already face such a high workload that health education is rarely done in health facilities. Even then, it is only given to those who are sick and are seeking services."

Decisions are made around the communal drinking pot

A grass-roots initiative is changing the way poor communities learn about health in Uganda. In 2007, Patrice Mawa Akusa, a research scientist with the Uganda Virus Research Institute, established the Science Café, an informal meeting of the science community and interested friends, in a bar in Entebbe. Akusa based his idea on the successful Café Scientifique concept that was founded by Duncan Dallas in Leeds, England, in 1998. Its aim is to take science out of its academic setting and make it accessible by holding free meetings in public venues on topics that lead to interesting discussions between scientists and the general public. Since then, the concept has spread all over the world and is now well-established with around 300 cafés in 40 countries, including Iran, Japan, Poland and Turkey, under names ranging from "Science in the Pub" in Australia to "Chai and Why" in India.

The problem in Uganda was that the science cafés were held in English, which left out a huge number of non-English speakers, many of who were poor and could not afford to buy beer in bars. These people heard about the science meetings and asked for them to be held in their language, Luganda, at the local "malwa" (millet beer) joint.



"The men spend their leisure time drinking the local drink. This is how decisions have always been made in traditional communities in Africa, gathered around the communal drinking pot," Munduru says.

<http://www.cafescientifique.org/photogallery.htm>. The first talk given in the local language was on "How can I live longer with HIV?" This event

was the catalyst for many participants to declare their HIV status and talk more openly on the subject. Hungry for more information, the local communities asked for more talks on HIV and for testing and counselling services to be provided at one of the meetings. "It was amazing," says Munduru. "Nobody wanted to miss out. Seventy people were tested and those who tested positive were referred for treatment".

Although this particular malwa joint is only 300 metres from a hospital where HIV-testing services are provided for free, the people had been reluctant to use these services. "I thought HIV test kits were as big as computers," one participant expressed, showing the level of ignorance among the communities.

One of the major challenges of health education in Uganda is lack of male involvement. "The women receive good information from the health centres but they can't put it into practice if the man is not involved as well," says Munduru. "Many women come home and keep quiet about their [HIV] test results, continuing to breastfeed, afraid of being thrown out of the home. Involving men is really important because men are decision makers in Africa."

Local language cafés have grown into important community events that are changing health behaviour. For example, after a talk about the risks of malaria in pregnancy, the men realized the importance of giving bed nets to their wives to sleep under, instead of using them themselves.

"We let the community take charge and choose the topics," says Munduru, "although we guide them to make sure that it is balanced. We empower them with information then leave them to make their own decisions. Health is the subject that affects people's lives the most here so that is what they keep asking for."

Other topics for discussion have included water and sanitation, climate change, human rights and domestic violence. "These are issues that are pertinent to the rural communities in Africa," she says. "Wherever local language café is introduced, it picks up very fast and becomes a household name," says Munduru. Demand has spread to church communities, who have asked

their pastor to reduce the time spent preaching to provide talks on such topics as first aid in the home.

The cafés have been successful in linking health providers to the people. "It's sometimes frustrating though that, after creating the demand, the health services aren't always available," says Munduru.

While the Ministry of Health has not been involved with this initiative, there is recognition that the café is an important supplement to the health system. Says Dr Jacinto Amandua, Commissioner of Clinical Services at the Ministry of Health, "It's very important that these talks are in the local language because people are more likely to listen. This is a very good programme but we need to do more, particularly in rural communities and for lower social groups."

Up until recently, the local language cafés have been running on what Munduru calls "the spirit of volunteerism" and some donations from Café Scientifique in Leeds. A recent grant of £10 000 from the Wellcome Trust will help the project to expand to more communities and villages within the Entebbe and Kampala areas.

Duncan Dallas, director of Café Scientifique in the United Kingdom, emphasizes the need for the cafés to become self-sustaining. "Whether they are in England or Africa, one of the problems for low-income cafés is remaining independent," he says. "They are not a charity, but a means of encouraging a local community to engage with science, technology and medicine as an independent unit."

He is positive that the local language concept developed in Uganda has great potential for growth and serves as a role model for other African countries. "This is an inspiring example of how cafés can assist in connecting the medical sciences to local cultures," says Dallas. "Most of the cafés in England are aimed at middle-class people, so for me it was an education that it could reach such a grass roots level as it does in Africa."

<http://www.cafescientifique.org/uganda.htm>

Kenia



The initial Science Cafe training was conducted at a one week seminar on Science Communication Skills in Grahamstown South Africa. The training was organised by British Council South Africa and saw 23 young African science communicators, including myself, Ms Ruth Wanjala, get trained on the science cafe model. While the model seemed interesting and innovative in South Africa, it was initially quite challenging to implement in Kenya. This was partly because some sections of the Kenyan scientific community were at first sceptical and unconvinced that serious science could be discussed in a coffee house setting.

It is fair to mention that some scientific organisations within Kenya were making efforts to communicate their research through scientific journals (targeted to the scientific community), policy briefs/roundtables (targeted towards policy makers) and media relations (targeted towards science journalists). As far as we knew, there were no efforts to engage ordinary lay Kenyans with scientific research in the country. The idea to engage the lay public in an informal setting was therefore quite attractive and timely for the country.

The Kenya science cafes were inspired by three realisations.

There was plenty of interesting and useful scientific research taking place in Kenya.

This research was hardly communicated/shared with the lay public

The existing communication/ dissemination practices within the scientific community were limited and not very effective.

Our motivation to develop science cafes in Kenya came from the fact that Kenyans needed to embrace scientific research done in Kenya. Evidence exists to problems facing Kenyans daily lives and this information needed to reach its intended audience the people for whom research is done for.

The first science cafe in April 2008, sat a mere 25 guests, a figure that has rapidly increased over the months to 100 people at any given science cafe.

People's awe and excitement of the cafes after each session kept us going and the willingness of the public to be kept up to date through emails, facebook, and twitter, was a clear indication that the public was keen to be engaged in science once provided with a platform such as the science cafes model.

The social context. What are the themes? What is your public? Do you know of other caf  s, which are different?

Our public mainly consists of middle class professionals who are curious about science as well as a respectable group of young students and also other scientists who want to hear other scientists engage with the public.



From experience, the themes of the Science Cafes rotate around health, agriculture and technology. It seems that most of the

people are interested in scientific research that will lead to improved life/livelihoods for them and development. Topics such as the Metabolism of a Computer Mouse or Deafness and Zebra fish would not strike a chord with these target audience.

Your story, comments. Who are the organizers? How many people abandoned? How many joined? Did the audience change in time? Do you know of other experiences that failed, and in this case, why?

Public engagement in a developing country is as interesting as it is challenging. The middle income group in Kenya is not much different from any group in the developed world and are quite comfortable sipping their lattes and cappuccinos as they discuss scientific research. Most of the attendants in this group Tweet and blog about the cafe, double check facts on their Smart phones and exchange Skype contacts.

This is unfortunately a small segment of the population in a developing country like Kenya. Engaging the rural and lower socioeconomic communities has been an insightful and eye-opening experience for the Kenya Science Cafes. Most of these communities are starved for information and so the engagement exercise unwittingly turns into a public education forum and the community usually expects more than just information from such a session.

A good example is the Kibera Science Cafe, which was held in one of Africa's largest slum. The Cafe was held on the premise that there was a large community of People Living with HIV/AIDS (PLWHA) who were not convinced that Anti Retroviral (ART) therapy was effective in their condition. This group was also confused about the World Health Organisations (WHO) directive to change ART regimes and needed plenty of information about how exactly ART medication works.

The Kibera science cafe brought representatives from the Government Aids control body, NASCOP, as well as other treatment based Community Based Organisations(CBOS), who took time to explain how the treatment works, the side effects,

the nutrition and addressed all the conspiracy theories around the availability of ARV drugs in Kenya. After the cafe discussions, the attendants were exceedingly convinced and aware of how the ART medication works but the ironic bit was the medicine was hardly available at the local health centres due to issues between the health ministries and the health funding agencies.

Another example was the women's health cafe where women became sensitised on the need for Pap Smears and visiting a Gynaecologist but cannot afford to go for a gynaecologist or the male circumcision Science Cafe where once people understand the research behind male circumcision for HIV prevention, should the procedure be made available for attendants that are willing to go through with it?

I think their needs to be more discussions on whether or not to differentiate public engagement and public education in Africa and other developing countries. Most experts agree that scientific research in Africa needs to be development based and based on the science cafe experiences, most of the people in the lower socio-economic cadres are not just interested in research for academic curiosity or for research's sake but are keen to see how the research will improve their health, access to food and ability to earn an income. I am aware this is quite different in the developing world where most of the scientific research is purist and intellectual.

The cafes have had a series of humorous, dramatic, insightful and low moments that have provided valuable lessons we hope to share with future science cafe conveners. Some of the lighter moments involved one of the speakers at Male circumcision who had come with his young daughter to the Saturday afternoon Science Cafe. After some time, he motioned for me to take his daughter to another section of the cafe so that her young ears would be spared the graphic details of exactly how male circumcision reduces the risk of HIV/AIDS. It was quite challenging to explain to the young girl why she was moved to another section of the cafe. One of the more interesting Science Cafes involved a Nakuru based youth group that had a full band play at a Cervical/Breast Cancer Science Cafe. This was a

first for us and the speakers had an interesting time churning out statistics on cervical cancer between the beats of Ritchie Valen's La Bamba.

One of the most insightful moments was at the mental health Science Cafe where one of the speakers who had been diagnosed with bipolar manic depression came out to boldly speak about living with a mental illness in Kenya. Mental illness is still largely stigmatised in Kenya and closely associated with sorcery. It was quite groundbreaking to see the young Kenyan break myths, misconceptions as he spoke about the needs and issues of mentally ill people in Kenya. The psychiatrists and researchers on mental health who shared the platform with him were also quite intrigued as his perspectives gave them a snapshot from the other side of the coin. We believe that this particular cafe did a lot to break the stigma of mental illness in Kenya. The young speaker has gone on to become the public face of mental illness and has been quite vocal in speaking about the issues facing mentally ill patients in Kenya and Africa.

We have also learnt that when dealing with disadvantaged communities, it is important to discuss community expectations beforehand because we have had cases where the community expects some sort of extension service, intervention or at least some financial token understandably because they have no other source of sustenance. This has been a prickly area for us since we are not mandated to provide extension but at the same time, it has been challenging to just give information to people who are deeply in need.

The method. How do you choose the themes, experts?

We usually determine Science Cafe themes by two ways. After each cafe, we pass round an evaluation sheet where we ask participants to suggest future topics. We also try and keep abreast with local and global events to inform science cafe topics e.g. Hosting a H1N1 Science Cafe when the pandemic came out, or having women's health cafe during the Women's day. Once a topic has been decided, speakers are approached and briefed and all logistics in place, we publicise the cafes

through email, a weekly paper called Kenya Buzz, and other social media channels, such as Facebook, Twitter and others. One unique thing with the Kenyan science cafes is that we ask attendants to confirm attendance so that it is sort of an emotional contract for the attendants. The funny thing is that about $\frac{3}{4}$ of the people who RSVP are the ones who actually come to the cafe.

We have also tried to put a personal touch whereby we bring someone who has had a personal experience with the subject matter in every science cafe. This has meant getting cancer survivors as well as oncologists for the cancer science cafe, getting young technology entrepreneurs besides fibre optic engineers in the fibre optic science cafe or getting speakers who have had psychiatric treatment besides psychiatrists at the mental health cafe.

We have also realised that journalists frequently come to the cafes to sniff out news stories and have an informal session with scientists and researchers. I think this is largely under tapped and I think it would be great to have a Press session either prior to or after a Science Café.

Ruth Wanjala

EUROPE

Florence, Italy

History

The beginning

In the fall of 2003, Paolo (Paolo Politi) phoned me. This is not unusual: he considers myself a quick shortcut to Wikipedia (computer and software section), so I am often presented with unusual questions about what hardware to buy or how to do something weird with computers. That time was different. He was just back from Grenoble where he had become aware of the existence of the Cafés Citoyen (which are not limited to science and technology). He explained me what a Café Scientifique was, and proposed to set up a similar experience in Florence. That was the beginning of our Caffè-Scienza.

The initial committee was formed by Franco Bagnoli (University of Florence, Unifi), Giovanni La Penna (National Research Council CNR), Paolo Politi (CNR), and Stefano Ruffo (Unifi).



We spent about 6 months discussing on how to organize the events and looking for a suitable place: we did not want to use University or CNR structures and the city of Florence does not offer many bar or pubs or

cafés, suited for a science-café project. We were in contact with the French Institute in Florence (IFF), with which some of us had already collaborated. In the June 2003 Michele Rossignol, once secretary of the CPT in Marseille, organized a scientific meeting Science et Société on the topic "Society and genetics" French Institute in Florence. Stefano Ruffo was among the invited speakers. The meeting had the character of a discussion, similar to a Scientific Café, except that it was held in the theatre of the Institute. Among the speaker there was Pedro Lima, a scientific journalist that organized a Bistrot Scientifique in



Marseille.

The institute owns a theatre (where for instance was organized a meeting with the Nobel Prize Pierre Gilles de Gennes) and an old-style library, but they are not exactly what we were looking for. Surely, they are not at all informal!

Nonetheless, we started collaboration with IFF that lasts nowadays: we co-organize about one debate per year.

In this initial period, we were largely influenced by the activity of the Lyonnaise association Mille et une sciences <http://www.1001-sciences.org>, that organized many events, with good advertising (we were astonished by the fact that they made different posters for each event!) and used a formula (sciences et citoyens) with which we agreed. That Pablo Jensen, a physicist Paolo Politi, animated association had known in the mid Nineties during a post-doc passed in Grenoble. Later, we profited of a visit of him to Florence, to discover some of their "tricks". On of them was surely the fact that the French CNRS recognized Pablo's activity as part of his duties. This acknowledgement has not yet been obtained by our main Institutions (CNR and Unifi).

In September 2004, we finally had real contacts with a real café: Bar Bizzaffe (BZF) in via Panicale, near the main market in the centre of Florence. The bar was located in the old premises of a publisher, Casa Editrice Vallecchi, and proposed itself as a multi-purpose place for art exhibitions, readings, debates and bookcrossing (<http://www.passe-livre.com/>). In this respect, we were lucky that the first good place we got in touch with gave immediately a positive answer.

In September we enlarged the organizing committee to Franco Bagnoli (Dipartimento di Energetica, Universita' di Firenze) Elena Castellani (Dipartimento di Filosofia, Universita' di Firenze) Giovanni La Penna (Istituto di Chimica dei Composti Organometallici, CNR) Laura Manetti (Istituto e Museo di

Storia della Scienza di Firenze) Paolo Politi (Istituto dei Sistemi Complessi, CNR) Michèle Rossignol (Istituto Francese di Firenze) Stefano Ruffo (Dipartimento di Energetica, Università di Firenze) Emiliano Ricci (giornalista scientifico)

In the meanwhile, the 21 October 2004 we meet Cathy Rachault, scientific attachée of the French Ambassade, who meant to organize a public round table about wastes, incinerators and landfills, with Italian and French experts. We suggested changing the format and organizing a caffè-scienza in December 2004. It was a real atypical caffè-scienza, with 6 experts and simultaneous translation.

At beginning, we hosted the web pages for the caffè-scienza on an academic server (in my lab), in October, 2004 we opened the web site caffescienza.it. The first server was a wiki (twiki.org), and the second was just formed by static html pages (generated by scripts on a different computers using Template Toolkit). Finally, in 2008, we moved to the current platform Joomla, hosted on a server in CNR.

We contacted also some radio for advertising. At beginning, we had contacts with Controradio, a widely listened radio in Florence, but we were asked to provide funds for a series of 5-minutes spots. At present, we have an interview for each debate on NovaRadio, <http://www.novaradio.info/>.

Unfortunately, the Bizzeffe experience lasted only one a few months: the place was closed and it became a restaurant, so we moved to a different place, as shown by the following table. In fact, we experienced many places during the years: the French institute, Pinocchio Jazz Club <http://www.pinocchiojazz.it/>, popcafé (open-air caffè-scienza) <http://www.popcafe.it/>, Libreria Café la Cité <http://lacitelibreria.info/>, the Faculty club in the scientific campus (open-air caffè-scienza). Since October 2007 we organize our caffè-scienza in the premises of a mutual aid society, SMS-Rifredi (<http://www.arcifirenze.it/circoli/circolischeda.asp?IdCircolo=704>).

The events

Follow-up

We tried several types of follow-up. For the first few meeting we took notes and put them on the web, in a wiki page arranged as a forum. It clearly takes a lot of time, but some preliminary investigations we are making at present suggest that it is (or would be) appreciated by the public.

The participation to the form has never been high. This may be also due to the web interface, rather Spartan. We shall try again using a different platform, maybe with Facebook.

We also experimented audio recording, but it is in conflict with audio amplification unless having a mixer (that we recently bought but not yet experimented with).

We finally tried the video recording, and we recently bought a digital camera. We put on a YouTube channel, for the moment with only one video:
<http://www.youtube.com/user/caffescienza>,
Opened and moderated by Valentina Santopaolo, who has also uploaded the first video (the one on CS on Galileo).

The problem with videos is that they require a process of editing, and downloading is fairly heavy. We are testing different formats.

We have opened a facebook group
<http://www.facebook.com/group.php?gid=60955954928>
opened by Emiliano Ricci and maintained by Alessandra Beni.

We opened a Twitter channel <http://twitter.com/caffescienza>.

The legal entity

We set up a non-profit organization (associazione culturale) just to be independent while having a legal personality. The management of the legal organization is quite light, we reunite once a year, essentially for organizing the scheduling of events and this is the occasion for fixing the legal stuff. Our secretary spends maybe one hour a month for the association. We receive

a small amount of money (10 € a year, 5€ for students) from associates.

Scheduling

At first, we organized the events one after the other, and produce flyers and posters for each event. Since four years we decided to plan the events for a whole year (from September to May) in advance. This has allowed to simplify the organization (we can "book" the experts well in advance) and ask for support for the printing of flyers and posters (they have been funded by CNR and Florence municipality).

Sponsors and advertising.

We received some help from the CNR, the Florence municipality (Quartiere 5), the French Institute and our associates. In one occasion, support was promised but we were never reimbursed of our expenses. Most of sponsorships were invested in advertising, mainly printing of flyers and posters. We also bought personalized pins (that are used as presents for experts and new associates), and we have an arrangement with a local radio (NovaRadio) for an interview with the organized the day before an event. Other radio asked for money. Local newspapers generally publish a short advice the day before a caffè-scienza.

Interaction with the University

In 2005, I was asked to give a lesson about the method of science cafés in the second-level master in scientific journalism for bio-medical sciences, and in 2007 Michele Viti presented his thesis *La scienza in valle - un progetto di divulgazione scientifica in Mugello* (Science in valley - a project of scientific popularization in Mugello) under my direction.

In the meanwhile I entered in contact with Prof. Donatella Lippi, of the Medical faculty, and we applied for a Specific Support Action of the European Union titled CAFE_S, Communicating And Fostering Ethics in Sciences- Fostering the dialogue about ethics in science, and especially in medicine via the typical approach of scientific cafés and interactive networking systems, which was unfortunately not supported.

In 2008, we had the support of the Engineering Faculty for the organization of the cine-scienza. We collaborate with the Center for Study of Complex Dynamics (CSDC) of the University of

Florence, of which most of our associates are also member.

United Kingdom,

Brighton

The thing I was most worried about when I took over Brighton Café Scientifique five years ago was booking speakers. No, I tell a lie: there was one even more worrying, almost unthinkable, scenario – that the chairperson would not be able to make it one month, and I would have to chair. But the most pressing problem, at the start, was finding speakers. I was a student, and did not have extensive contacts in the scientific community. I didn't have any "clout" – there was nobody to whom I could say "about that favour you owe me ..." In fact I had only taken the job on because the previous organiser was going abroad, and no-one else seemed to want to do it. Would I live to regret my decision?

Actually, there was one person I was able to persuade through personal acquaintance – and he was quite a "big name" – and I felt immensely proud when he agreed to come. However, his performance was unremarkable, and I soon learned that being a "big name" did not mean someone would necessarily be a good Café Sci speaker. I began to make a list of people I had seen giving good talks outside Café sci, or people I had read interesting articles by. I went to other Cafés when I could, or trawled Café websites for interesting sounding speakers. Looking for speakers in that way had the advantage that I could ask the organiser of the café they had spoken at whether they were any good, which made it a better method than relying on written work or being a "big name".

Gradually I built up a good head of bookings. Most of our invited speakers did OK – even the guy who had disappointed me was not a complete disaster, because, as I learned, a Café Sci audience can often rescue a mediocre speaker. Of course, I had to learn how to deal with unsolicited approaches, and I am not very good at saying "no", but thankfully there were not many

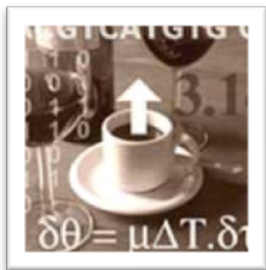
of these, and at least 50% of them turned out to be very good speakers, including Mark Haw, who was one of our best ever. You discover that the very best speakers really enjoy doing Café Sci and some will simply take it upon themselves to contact you rather than waiting to be contacted.

I am aware that some cafés – perhaps most – pick a topic and then try to find a speaker, but the method I have developed over the years revolves entirely around finding good speakers, regardless of their field. This could potentially lead to a lot of repetition of topics, but in practice it hasn't worked out that way. What it has meant is that I have been able to cherry-pick the very best speakers, and these people have the knack of putting their message across and inspiring people, and are also very good at answering questions, however zany. So that method works for me, and I have stuck to it. The way I see it, those people are out there, and we should use them. One of our best speakers, Peter Atkins, was a pioneer of the Public Understanding of Science movement, and is now retired and very available. He was a huge hit; booking him was what I believe people call a “no-brainer”.

In any case, I would not want to change to a topic-centred approach because you then have the additional headache that, if you are fixated on the topic, the speaker you choose may not actually be much good. I have been to cafés where the speaker has clearly been someone who has been asked, or volunteered, to speak on a topic they know very little about, and the result has not been pretty. My last year as organiser (I “retire” at the end of July) has been perhaps my best yet. I have been able to invite two of my all-time favourite speakers, Simon Goodwin and Philip Burrows, and they did not disappoint; and in fact, most of the others I have booked have been pretty good too.

Finally, I overcame my fear of chairing. When our chairperson had to leave to work abroad, I just stepped into her shoes and I found it worked. I am not a particularly good chairperson, and I do not enjoy it all that much, but I have found that I can do it if I have to, and that has been a very welcome piece of self-discovery.

Leeds



How did it all start?

In 1998 I was reading the obituary of Marc Sautet, founder of the Café Philosophique movement in France. He was a philosopher who had failed to interest the business community in philosophy so he developed the idea of open, free and public discussion in Cafes, I knew that several Cafes Philosophiques had been tried in England but had not taken off. I suspected that was because the Anglo Saxons considered philosophy a cranky continental subject not to be taken seriously. However I knew that the English take Science seriously and that offered the basis for some interest. I glanced up from the newspaper and right across the way was a small café-bar, which was closed on Mondays. The owner agreed to open up for one night; I rang a local academic who had written a newspaper article criticising Richard Dawkins for the Selfish Gene, put a poster in the window of the café, told some friends and crossed my fingers.

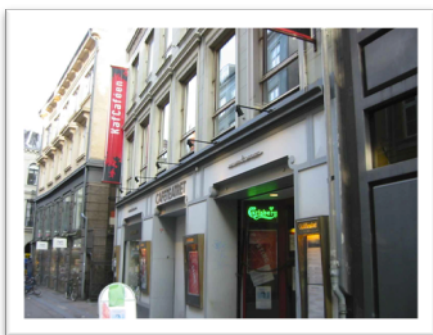
Although I would have been happy if a dozen interested people had turned up, in fact over 30 came. But as the speaker started to talk my heart sank to my boots, because he talked in academic jargon as though addressing students. Fortunately after his 20 minute talk we had to have a break for drinks, because the coffee machine had been turned off during the talk because it was too noisy. After this break, once the audience started to ask questions the evening improved rapidly. The speaker began to realise whom he was talking to and what he had to explain. The questions were simple, direct and often difficult, so the speaker began to think on his feet, always an enjoyable spectacle for the audience. So the evening was a modest success.

I organised another one shortly after that, also well attended, and what surprised me then was that people kept coming up to me and asking when the next one was and how much they

were looking forward to it. It slowly dawned on me that I had accidentally discovered a real appetite for science and discussion – not science as taught in schools but science as experienced and debated. There was also a real appetite among scientists to explain their work and they too seemed to enjoy these evenings. And it was only six months later, when I looked on the Internet, that I discovered that some Cafes had also started in France a year before, although with a different format. The idea was clearly a child of its time.

Duncan Dallas <http://www.cafe-sci.org.uk/>

Denmark



The first Danish Science Café event was in May 2001 with the topic "Nanotechnology Meets Art." There, Francois Grey, nanotechnologist and former Vice-Director of the Microelectronic Centre at The Technical University of Denmark, and Kirsten Dehlholm, Performance

Artist and Director of the theatre group Hotel Pro Forma challenged each other. The venue was held at the trendy café, Temple Bar – later, the Science Café moved to the café-theatre KafCaféen, in the heart of the old city. Temple Bar was packed with an interested audience composed of scientists, artists, and poets. Everybody was enthusiastically packed into the very hot

room, where the only cooling factor was cold draught beer.



The dialogue hinged on scientists using artistic methods in their creative

research, and artists using scientific methods in their artistic work. Many critical questions addressed whether researchers' procedures were adequately creative for the development of new science. The guests also debated whether new art tends to reduce science to a palette of aesthetical symbols rather than allowing scientific logic to prevail.

In her multimedia performance *Site Seeing Zoom*, Kirsten Dehlholm used elements from the natural sciences. For example, she displayed on a giant screen a benzene molecule trying to penetrate a C60 molecule. The focus point had little to do with chemical reactivity. Rather, the artist reflected on the relative colours and gender inherent to molecules. Conversely, Francois Grey reflected on the aesthetic nature of science. Specifically, he referred to the C60 molecule as an example of the beauty of symmetry in science. The C60 molecule is made of 60 carbon atoms, linked together in a structure that interestingly resembles the shape, of a football. He likened beauty in science to the simplicity of geometrical shape or sometimes to the simplicity of mathematical equations that describe complex phenomena such as $E = mc^2$.



Site Seeing Zoom was playing at Kano hall on the same time that Science

Café "Nanotechnology Meets Art" took place. It was not just an

encounter of two different languages. Both art and science have a purpose, inherently and mutually. From a societal perspective, the debate skirted on the hopes and fears of nanotechnology. Several people among the audience were acquainted with disturbing media articles on the notion that one day nanosized robots could run amok. Others were curious to know whether these very small robots could in fact swim around the cardio-vascular system, diagnoses potential health problems and fix body parts. But Francois Grey's predictions must have been somewhat of a disappointment to both the sceptics and enthusiasts of nanotechnology. He argued that within the foreseeable future, nanotechnology would have more immediate applications in such mundane products as detergents and anti-wrinkle lotions.

The remaining question was whether the arts could come up with more visionary and yet realistic societal views for the future.

Finland



We have
been
running
Café
Scientificu

e in Tampere since June 2008. It all started by some half-hearted remarks about how nice it would be to gather people together over a cup of coffee and a good talk. We found the perfect venue in Finlayson: the former textile factory is now converted to offices, shops and restaurants. The factory floor is still there, complete with two gigantic hooks hanging from the ceiling.

The open space of the factory floor is the perfect place for our purposes, it is the living room of the people in Tampere, who walk past it, through it and into it on their way to work, for a meal or an evening in the nearby cinema.

The interesting thing about the cafés is that there is hardly any money. The cafés are run by voluntary helpers: one of us takes the massive sound equipment to the venue, another places chairs in a cosy half-circle while a third makes sure the speaker has a glass of water nearby. Many people are keen to help: a professional made our poster designer who then took it to a Graphic Exhibition in Chicago with great success. Our loyal agent in the factory floor makes sure we get a stage for each event – and even an armchair to make the space cosier.

We always count the numbers: our record was the first autumn café with 200 participants, and we've never had fewer than 40.

Everybody's united in his or her interest in science. We have had talks on dark matter, biorhythms, and the ethics of the pharmaceutical industry, human migrations, and bacteria, Down syndrome.

The atmosphere in the cafés is almost tangible: when the speaker leans forward and assuringly asks the audience "Are you still with me?" we either nod happily or look a bit puzzled, in which case we get a further explanation on why bacteria are so keen to attach themselves into our tendons, or why taking pills should follow your biological rhythm in order to produce best possible results.

Our role is largely educational. The main part of the audience consists of students. Some are there because "the teacher made us"; others because it is a great place for meeting friends, and while doing so you might as well pick up a few useful facts.

For many of the attending students the cafés have been extremely useful: some of them are involved with scientific projects at school, and have been able to discuss these with leading experts in the field.

The students have their responsibilities: they always introduce the speakers, thank them afterwards (and ask the inevitable first question in case the audience keeps quiet), and make sure the events run smoothly. The speakers learn how to address an audience where people with very little knowledge of the field in

question might sit next to an expert. To find the correct level is never easy, but definitely worth the effort.

In these days of the Internet word gets around, and we became famous by accident: Seed, the web-based science magazine wanted to include us in their series of science cafés around the world. We fully agree with the goal of Café Scientifique, this is indeed “humanizing science, one person at a time.”

http://www.uta.fi/imt/cafe_scientifique/index.php

ASIA

Iran



There may be problems in difficult political and cultural situations. In Iran public meetings are

not encouraged – in case they talk about politics. Groups in Cafes are not encouraged – again for political reasons. Women and men are not encouraged to meet together either. Iman Adibi, a doctor, wanted to start a Café, but he did not take any advice from any Café websites about advertising, media, topics, speakers, venues, etc. He did it his own way.

Firstly he had to sign a document for the café venue in which he



agreed to pay any costs for damage done due to arguments, police action, etc. At the first meeting he talked about his work, and just invited a few of his friends. At the second meeting he invited a friend to talk and he invited friends and some women

from the university.

A few weeks later he invited an Imam from the university to

talk. The Imam was very suspicious about the aims of the group, who was funding it, etc. However when he became convinced that it was only science they were interested in, not politics or religion, he agreed to talk, but not at the café but in his own office. So the group came to his office and held the Café there.

Some time later a well known scientist was visiting Isfahan, where the Café is, and Iman asked him to speak to them if he had a couple of hours free. The scientist did, the audience enlarged, and the Café became recognized and accepted. It is called Café Elm and has now been going in Isfahan for 3 years. (imageson Youtube)

<http://cafe.ghaaf.ir/>

Nepal

Experience on first Café Climate in Nepal and Potentials for Regional Upscaling

In 2009, British Council Nepal started an ambitious awareness raising project among the youth on climate change. The project was still in the design phase and aimed to encourage the involvement of the youth of Nepal in community work to raise awareness for climate change. In the process of implementing the initiative, we developed partnership with organisations already working on the subject. During the planning and initiation phase we visited ICIMOD at Kathmandu, had a chat with the Director General, and were shown around the office; they showed us some of their work, the potential impact of melting glaciers through computer scenario forecasting programs, and the immense data of knowledge resources they had on the subject in the form of books and online resources. We were amazed with this well-managed resource centre.

Since our project dealt with working with the youth and their communities, we thought that the two organisations can work together in some way, where British Council provides the networks of young people, and ICIMOD shares the knowledge that they have. From the seeds of this idea was developed the concept of “Café Climate”, which was planned after the model of other Café Scientifique organized by British Council in other

parts of the world.

The event was organized in partnership with British Council and ICIMOD and was a first in Nepal. There was excitement about the one-time project from both the organizers as well as the participants, and eagerness about the possibilities of expanding its reach as a first-step awareness-raising towards future action. The first café event was low key but participatory. It was not advertised but was informed through the network of our champions. The audiences consisted of young people from our network of Climate Champions whose age ranged from 18-35 – the future citizens and leaders of this planet. There were 80 participants altogether, quite a large number, but we had to accommodate them, as this event does not happen every so often.

The first Café Climate was organized in February 2010, and the concept was liked by most of the public that participated. Some of the audience thought it was a good model to start even in the rural areas in tea stalls where people generally sit and chat.

The theme was chosen based upon the project we were working on, climate change, and hence was named Café Climate. The expert/ communicator was chosen from our contact, Clive Bowman from the University of Islands and Highlands, UK. The story of this café was published in our website, however we did not invite the media to the event and hence this did not get as much publicity in the local media as it deserves.

But its possibilities are immense, so based on the experience of this inaugural Café; we plan on broadening its scope of reach, not only in Nepal but also in the other countries of the region involved in the Climate Change project. ICIMOD has promised full support on the scientific knowledge sharing aspects; however talks are still ongoing in other countries on its implementation.

Smreety Dewan, British Council Nepal, Daan Boom and Joyce Mendez, ICIMOD

Japan

Kyoto,

Our motivations:

Since 1990s, due to the rapid industrial development, environmental pollution has become serious. People started to question whether science is really contributing to mankind's happiness. Science has been losing its popularity. Fewer young people nowadays choose to study science and to work in science and technology.

But this detachment from science is greatly due to prejudice. Many people are avoiding science simply because of its "bad image" without touching it. Teachers and intellectuals have been discussing how to solve this trend of "science is unfashionable".

Meanwhile, the Kyoto Protocol was adopted in 1997 in order to solve climate change. It was reported in the media that science and technology should play an important role in putting the protocol into practice.

Our main concern is how to make a new trend of "valuing science and technology" overcome the trend of "science is unfashionable".

Our story:

The city of Kyoto was the capital of Japan for more than 1,000 years until the mid 19th century. It is a city of culture and heritage. It has more than 40 universities, many industries developing the latest technology, and several Nobel Prize winners. People in the city show a strong interest in the universities and are supportive of their activities.

In summer of 2004, some retired academics with time on their hands got together with leaders of civic activities, and discussed the future of science and its position in society. We agreed that it is important to provide the occasion where the general public meets scientists and get close to them, hear about their research and discuss it.

Coincidentally, a detailed article on the activities of a "café scientifique" in the UK came out in a government-issued white paper. We were very inspired by the article and thought they were what we should be aiming at. We named our group "Café Scientifique Kyoto". We held our very first meeting at a

community centre, where we organised a talk by a pathologist and a discussion followed. Although the number of participants was less than twenty, not so large, it was well received and we decided to hold a monthly meeting. Gradually, more and more people share our aim and join us as a member of staff to manage the café.

The social context:

In 2005, Café Scientifique Kyoto got approval as an NPO (Non-Profit Organization), increasing its profile.

We had our 66th meeting in July 2010. Recently, the number of participants has reached around 60 on average. Our speakers—experts in their fields—are all very sympathetic with our aims. Although the speakers are unpaid, the talks they give are very well prepared, and they are eager to answer questions from keen participants. The discussions often continue beyond the planned closing time. Those who attend say they are very pleased by the meeting. We are hoping to continue our café for a long time into the future. The choice of invited speakers is made mainly by the recommendation of our management team, taking into account the preferences of participants from the general public. The subject area is not fixed and is left to the nominators.

Publicity:

Our activities are reported in the media (mainly newspapers), and on the internet (our website and mailing list). In general, media reports are positive and helpful. We also exchange information with other cafés in Japan and cooperate with each other. Unfortunately, there are not so many young people coming to our café yet. Our next challenge is, by learning from the British experience, to organize more cafés targeting teenaged students.

Japan bio-café

Bio Café (Kayabacho, Tokyo, Japan)

What is Bio Café?

Our Bio Café deals with topics concerning “Biotechnology and our Life”. It has been held monthly since March 2004. All of our Bio Café’s reports can be searched on WEB (<http://www.life-bio.or.jp>). At moment, the number of the reports is more than one hundred.

Our motivation

We would like to know and discuss about Biotechnology with respect to our Life. Biotechnology nowadays becomes a core technology for food production, medicine development and environmental remediation. We really hope that people including us can determine their minds with proper information, evidence and other people’s opinions on both biotechnology and its outcomes provided.

Bio Café, thus, sets a scene for ordinary people (especially those after school education) to be able to know about the information and the evidence, and discuss on these with researchers and other people.

Program

Bio Café has about ninety minutes time. At first, we appreciate music, which is played by violin, cello, flute for about ten minutes, a speaker makes a speech for forty minutes then talk together with delicious coffee and homemade cakes. We hope all people who gathered Bio café feel at home in our Bio Café.

What we learned from Bio Café

Not only audience but also speakers have happy time to have dialogue in equal relationship. The dialogues include such topics as “What is plant biotechnology?” “Do you try genetic test?” “How is today’s global warming?” “Is trans Fat safe? They cover wide rage and various people hear how and what other person think. Some time researchers get imagination from their dialogue. The results of the questionnaire for both audience and speakers teach us how to make Bio Café with rich hospitality.

Contribution of participants

At the end, then, we say to thank all Bio Café participants for taking the most important role.

We welcome newcomers every time, and make equal atmosphere for everyone to make remarks.

Yoshiko SASSA